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IRRIGATION DEPARTMENT, PUNJAB.

ADMINISTRATION REPORT

FOR

1918-19.

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ADMINISTRATION REPORT FOR THE YEAR 1918-19.

Part I.

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PUNJAB CANALS.

Year.	AREA IRRIGATED, IN ACRES.		
	Punjab Canals, Major Works.	Punjab Canals, Minor Works	Total.
1887-1888 ...	1,422,775	918,328	2,341,103
1888-1889 ...	1,749,957	997,428	2,747,385
1889-1890 ...	1,863,156	994,710	2,858,166
1890-1891 ...	2,033,500	982,956	3,016,456
1891-1892 ...	2,144,392	1,049,154	3,193,546
1892-1893 ...	1,847,882	1,079,709	2,927,591
1893-1894 ...	1,903,654	958,664	2,862,318
1894-1895 ...	1,855,858	1,063,296	2,919,154
1895-1896 ...	2,852,363	939,200	3,791,563
1896-1897 ...	3,649,303	960,110	4,609,413
1897-1898 ...	4,052,289	1,158,360	5,211,649
1898-1899 ...	3,872,501	984,264	4,856,765
1899-1900 ...	4,281,972	859,522	5,141,494
1900-1901 ...	4,642,852	1,357,699	6,000,551
1901-1902 ...	4,491,838	981,521	5,473,359
1902-1903 ...	4,664,274	815,690	5,679,964
1903-1904 ...	5,610,787	779,547	6,390,334
1904-1905 ...	5,689,132	617,252	6,306,384
1905-1906 ...	6,163,369	751,067	6,914,436
1906-1907 ...	5,902,995	803,317	6,706,312
1907-1908 ...	5,515,396	821,558	6,336,954
1908-1909 ...	6,385,050	968,096	7,353,146
1909-1910 ...	6,117,004	969,607	7,086,611
1910-1911 ...	6,270,757	956,235	7,227,012
1911-1912 ...	7,469,645	862,247	8,331,892
1912-1913 ...	7,461,251	963,130	8,424,381
1913-1914 ...	7,351,721	971,743	8,323,464
1914-1915 ...	7,883,628	1,079,413	8,963,041
1915-1916 ...	7,982,532	902,279	8,884,811
1916-1917 ...	8,493,867	1,055,957	9,549,824
1917-1918 ...	7,986,858	1,077,513	9,064,371
1918-1919 ...	8,348,146	667,838	9,015,984

From 1894-95 to 1905-06 the total areas shown are *net*, thereafter the areas are *gross*.

The areas include the Swat River Canal up to 1900-01, after which date, the canal was transferred to the North-West Frontier Province.

PUNJAB CANALS, MAJOR WORKS.

YEAR.	AREA IRRIGATED, IN ACRES.			REMARKS.
	Kharif.	Rabi.	Total	
1887-1888	645,846	776,929	1,422,775	Lower Chenab Canal opened.
1888-1889	715,632	1,034,325	1,749,957	
1889-1890	661,677	1,201,779	1,863,456	
1890-1891	757,535	1,275,965	2,033,500	
1891-1892	697,454	1,446,938	2,144,392	Sirsa Branch of Western Jumna Canal opened.
1892-1893	323,235	1,024,647	1,847,882	Decrease due entirely to the favourable winter rains of 1892-93 which greatly contracted the irrigated rabi area.
1893-1894	711,001	1,192,653	1,903,654	Decrease as compared with 1891-92 due to general rainfall in rabi 1893-94, and would have been greater but for new irrigation on Chenab Canal.
1894-1895	703,930	1,151,958	1,855,888	Decrease due to very favourable rainfall during rabi, particularly in Sirhind and Western Jumna Canal tracts.
1895-1896	985,827	1,866,556	2,852,383	Increase chiefly due to partial failure of rains of 1895 and subsequent drought.
1896-1897	1,534,969	2,114,334	3,649,303	Increase due to drought.
1897-1898	1,777,565	2,275,724	4,053,289	Increase due to favourable year for irrigation and extensions.
1898-1899	1,413,823	2,458,679	3,872,501	Decrease in kharif due to favourable state of rivers and scanty rainfall.
1899-1900	1,888,398	2,436,574	4,384,972	
1900-1901	2,354,174	2,288,678	4,642,852	
1901-1902	1,686,043	2,805,795	4,491,838	Lower Jhelum Canal opened.
1902-1903	2,071,363	2,792,911	4,864,274	The Upper Sutlej Inundation Canals were transferred from head "Minor Works" to "Major Works" from 1st April 1902.
1903-1904	2,450,739	3,160,048	5,610,787	The Indus Inundation Canals were transferred from head "Minor Works" to "Major Works" from 1st April 1903.
1904-1905	2,381,786	3,307,346	5,689,132	
1905-1906	2,294,460	3,868,911	6,163,371	Decrease in kharif due to cotton failure.
1906-1907	2,435,219	3,467,776	5,902,995	
1907-1908	2,226,291	3,289,095	5,515,386	Decrease due to abnormally low supplies in the rivers.
1908-1909	2,695,518	3,693,532	6,385,050	
1909-1910	2,285,870	3,831,134	6,117,004	
1910-1911	2,254,333	4,016,424	6,270,757	
1911-1912	2,755,324	4,714,321	7,469,645	
1912-1913	2,929,309	4,531,942	7,461,251	Upper Chenab Canal opened.
1913-1914	3,069,950	4,281,771	7,351,721	Lower Bari Doab Canal opened.
1914-1915	3,164,751	4,698,877	7,863,628	
1915-1916	2,886,578	5,095,954	7,982,532	Upper Jhelum Canal opened.
1916-1917	3,441,467	5,052,400	8,493,867	Decrease in kharif due to drought and abnormally low supplies in the rivers.
1917-1918	3,333,822	4,652,566	7,986,388	Decrease in rabi due to unusually low supplies in rivers and failure of winter rains.
1918-1919	3,465,286	4,882,860	8,348,146	Decrease due to excessive rains in kharif and to some of the land flooded by rain in October not drying up early enough to permit of rabi irrigation.

The areas include the Swat River Canal up to 1900-1901, after which date the canal was transferred to the North-West Frontier Province.

From 1894-1895 to 1905-1906 the total areas shown are net; thereafter the areas are gross.

PUNJAB CANALS, MINOR WORKS.

YEAR.	AREA IRRIGATED, IN ACRES.			REMARKS.
	Kharif.	Rabi.	Total.	
1887-1888	503,695	413,433	918,323	
1888-1889	571,558	425,870	997,428	
1889-1890	512,112	452,598	964,710	
1890-1891	520,103	462,518	982,621	
1891-1892	452,190	596,611	1,048,801	
1892-1893	491,151	588,358	1,079,509	Rivers rose late, but subsequent supplies were good, and rainfall was favourable, the result being the largest area on record up to date.
1893-1894	470,917	518,747	989,664	Decrease due to the destruction of Kharif crops by high floods and to less favourable working of the canals.
1894-1895	500,213	563,018	1,063,231	
1895-1896	477,957	461,213	939,170	
1896-1897	503,745	426,265	930,010	
1897-1898	565,582	592,778	1,158,360	
1898-1899	453,402	530,862	984,264	
1899-1900	520,893	333,629	854,522	
1900-1901	669,563	688,136	1,357,699	
1901-1902	508,416	573,105	1,081,521	
1902-1903	421,819	390,871	812,690	Decrease due chiefly to the transfer of the Upper Satlej Inundation Canals from head "Minor Works" to "Major Works" from 1st April 1902.
1903-1904	316,415	463,129	779,544	Decrease due chiefly to the transfer of the Indus Inundation Canals from head "Minor Works" to "Major Works" from 1st April 1903.
1904-1905	296,676	329,616	626,292	
1905-1906	298,279	452,788	751,067	
1906-1907	295,898	507,119	803,017	
1907-1908	258,074	266,481	524,555	
1908-1909	442,098	526,008	968,106	
1909-1910	426,020	513,587	939,607	
1910-1911	459,270	497,015	956,285	
1911-1912	402,641	459,606	862,247	
1912-1913	467,957	500,173	968,130	
1913-1914	464,872	506,871	971,743	
1914-1915	466,107	613,306	1,079,413	
1915-1916	362,607	533,672	896,279	Decrease due to drought and abnormally low supplies in the rivers.
1916-1917	452,348	633,609	1,085,957	
1917-1918	463,729	613,784	1,077,513	Decrease due to excessive rainfall.
1918-1919	313,334	354,504	667,838	Decrease due to low river supplies and adverse climatic conditions.

The above includes the areas irrigated by the Shahpur Provincial Canals from 1890-1891 inclusive.

The above includes the areas irrigated on Ghaggar Canals, British and Bikaner State.

From the year 1891-1895 to 1905-1906 the areas shown are net; thereafter the areas are gross.

PUNJAB CANALS, MAJOR WORKS.

YEAR.	Capital outlay, Direct and Indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Accumulated profits to end of year (column 4—column 3).	FOR THE YEAR.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
					Rs.	Rs.	Rs.	Rs.
1	2	3	4	5	6	7	8	9
1897-1898	5,76,23,623	3,18,45,764	5,09,35,631	1,90,88,867	49,05,923	17,01,249	23,04,676	3.99
1898-1899	5,89,48,409	3,40,74,453	5,33,27,633	1,92,53,180	43,01,991	19,72,987	23,02,007	4.06
1899-1890	6,00,98,478	3,03,49,808	5,01,80,320	1,98,30,513	49,86,797	21,14,116	23,52,682	4.74
1890-1891	6,21,71,861	3,80,93,707	5,03,37,074	2,11,43,307	58,30,410	21,73,686	36,56,724	5.85
1891-1892	6,70,91,026	4,11,74,523	6,36,26,120	2,34,51,603	60,40,990	22,51,933	37,89,052	5.65
1892-1893	6,97,92,824	4,37,09,997	6,79,83,641	2,42,84,617	63,09,149	24,51,631	43,57,518	6.24
1893-1894	7,34,59,870	4,65,49,772	7,09,59,491	4,43,40,719	53,50,907	24,45,000	29,05,847	3.95
1894-1895	7,61,95,573	4,94,29,432	7,42,01,493	2,47,75,001	59,65,551	26,50,519	33,15,032	4.33
1895-1896	8,02,57,067	5,24,41,536	7,87,76,591	2,63,35,026	70,98,251	28,40,474	42,57,780	5.31
1896-1897	8,41,00,266	5,56,01,216	8,56,31,033	3,10,32,817	1,09,44,443	30,87,005	78,57,438	9.34
1897-1898	8,70,19,565	5,98,02,163	9,56,26,220	3,67,44,063	1,21,89,119	31,86,227	90,02,192	10.35
1898-1899	8,92,16,631	6,22,82,641	10,44,91,514	4,22,69,173	1,24,07,093	35,51,505	88,55,588	9.93
1899-1900	9,03,47,216	6,57,49,487	11,37,77,761	4,50,28,274	1,34,14,661	41,29,714	92,85,944	10.21
1900-1901	9,20,75,977	6,02,70,360	12,40,93,216	5,49,21,697	1,46,10,136	43,01,651	1,03,14,485	11.20
1901-1902*	8,01,41,688	6,93,30,552	13,15,68,916	6,15,78,364	1,16,25,193	43,20,919	1,03,08,279	11.53
1902-1903	10,31,61,089	7,53,70,849	14,46,26,777	6,01,89,023	1,65,14,594	49,22,673	1,17,91,021	11.39
1903-1904	10,69,07,917	8,03,36,374	15,82,78,699	7,70,42,526	1,55,73,691	57,18,071	1,28,55,620	12.02
1904-1905	10,57,58,316	8,44,56,907	17,16,51,215	8,71,91,333	1,06,10,593	62,38,217	1,38,72,346	12.29
1905-1906	11,01,51,719	8,86,86,692	18,37,47,723	9,51,11,106	1,33,86,568	65,90,266	1,17,40,302	10.60
1906-1907	11,11,16,550	9,53,01,017	19,79,51,811	10,56,47,761	2,21,75,797	69,78,997	1,51,97,700	13.68
1907-1908	11,23,53,171	9,59,51,870	21,10,52,103	11,50,70,233	2,02,79,693	71,79,407	1,31,00,286	11.64
1908-1909	11,28,02,325	9,96,67,325	22,48,80,401	12,52,23,076	2,11,00,012	72,71,714	1,38,28,298	12.20
1909-1910	11,33,18,773	10,33,19,741	23,93,61,131	13,00,41,893	2,23,99,978	70,19,246	1,44,80,733	12.78
1910-1911	11,43,51,721	10,70,28,093	25,49,75,785	14,79,47,692	2,34,18,942	78,02,201	1,56,14,651	13.60
1911-1912	11,62,22,814	11,08,11,169	27,87,29,763	16,29,18,599	2,71,10,441	83,55,453	1,57,53,983	16.18
1912-1913	14,02,99,761	11,83,74,367	29,78,41,169	17,91,00,813	3,27,93,330	86,51,029	2,41,11,401	16.48
1913-1914	16,77,87,610	12,53,50,785	32,37,69,670	10,84,18,885	3,47,39,517	89,11,916	2,59,28,501	15.45
1914-1915	17,17,13,710	13,11,06,084	34,99,67,665	21,70,01,582	3,45,62,445	93,21,449	2,52,37,996	14.70
1915-1916	21,69,51,484	14,40,61,291	37,26,65,974	22,83,01,673	3,45,89,501	1,09,31,516	2,36,58,289	10.90
1916-1917	22,06,16,193	15,10,65,128	40,13,27,395	25,02,62,267	3,96,31,912	1,09,70,471	2,86,61,441	12.99
1917-1918	22,33,05,164	15,85,49,520	42,80,26,800	26,94,77,289	3,78,03,265	1,11,03,851	2,67,09,414	11.95
1918-1919	22,45,11,551	16,61,18,295	45,63,27,320	29,22,09,025	4,13,14,912	1,10,14,431	3,03,00,511	13.50

*Excludes the figures relating to the Swat River Canal, which now belongs to the North-West Frontier Province. The figures up to 1900-1901 include the figures of that canal.

The gross revenue in column 6 is that actually collected during the year and differs from the revenue as assessed on the area irrigated in the year.

GOVERNMENT OF THE PUNJAB.
PUBLIC WORKS DEPARTMENT.

Irrigation Branch.

No. 7-R. I.

The 7th January 1920.

*Resolution by His Honour the Lieutenant-Governor of the Punjab and
its Dependencies.*

READ—

Administration Report by the Chief Engineer, Irrigation Works, Punjab,
of the Canals in the Punjab for the year 1918-19.

Capital Outlay.

THE total outlay to date (direct and indirect) on canals in operation, classed as Productive, or Major, Works, amounted to Rs. 23,99,91,465, including Rs. 1,54,82,914 contributed by Native States. During the year the nett expenditure was Rs. 12,07,566 (Imperial Rs. 12,06,387, Contribution Rs. 1,179) after deducting a sum of Rs. 6,96,338 which was realized mainly—

- (a) from sale of surplus stores and Tools and Plant rendered available by the completion of works on the Triple Canals ; and
- (b) from colonists on account of cost of watercourses which Government had built for them in advance, in order to secure rapid development of irrigation on the Triple Canal System.

The corresponding expenditure in preceding years was Rs. 26,92,930 in 1917-18 and Rs. 36,80,096 in 1916-17, the decrease being due to the completion of the Triple Canal System, the construction estimate of which was closed on 31st March 1917, and to labour and transport difficulties, which interfered with the completion of certain works on the Lower Chenab and Lower Jhelum Canals.

Nature of seasons.

2. *Kharif, 1918.*—Conditions were unfavourable at first, as the preceding *rabi* season had been exceptionally dry, and less moisture than usual remained in the soil. Rainfall in March assisted the preliminary sowings, particularly of cotton and cane, but the conditions of April and May were again unfavourable, and the crops received little or no assistance from rain. The monsoon began in June, but the current was extremely weak, and breaks in the rains occurred more often than usual. Rainfall improved during the latter half of August, but failed thereafter ; and the total rainfall from June to September was very much below the normal. The sowings were restricted, and standing crops suffered through the insufficiency of the monsoon rains, and from attacks by grasshoppers and other insects.

The scanty monsoon resulted in low river levels, and the Inundation Canals drew less water than usual. The demand for canal water was very keen ; and on the perennial canals it was, on the whole, satisfactorily met ; as the river supplies, though lower than usual, were under complete control.

Rabi, 1918-19.—The river supplies fell very early in the season, owing to the very poor monsoon rainfall, and much of the available water was utilized by the cultivators for the maturing of their *kharif* crops. *Rabi* sowings were further interfered with by the influenza epidemic of October and November 1918. There was some rainfall in the second week of December, advantage of which was taken for *rabi* sowings. A period of dry weather then ensued and lasted till end of January, when there was a substantial fall of rain throughout

the Province, doing immense good to the crops. Thereafter the weather was generally dry till the end of March, when light, but fairly general, rain fell, which further benefitted the standing crops.

Generally speaking, the climatic conditions were unfavourable for the sowing and maturing of the *khārif* crops, and for the sowing of the *rabi* crops.

Areas irrigated, etc.

3. The areas irrigated and matured by works of all kinds compare as follows with the corresponding figures for the two previous *triennia* and for the year 1917-18:—

Particulars.	AVERAGES OF THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
<i>Imperial and Provincial.</i>				
Area irrigated	8,059,458	8,646,495	8,600,153	8,415,472
Area matured	7,667,893	8,015,458	7,976,055	7,974,417
<i>Native States.</i>				
Area irrigated	580,300	578,787	468,731	600,511
Area matured	552,837	575,558	461,639	597,621

In the case of Imperial and Provincial Canals the area irrigated was about 2,00,000 acres less than in 1917-18 (a year of abnormally heavy rainfall), but the area matured was about the same in either year, the flooding of 1917-18 having done more damage than the drought of 1918-19. The area matured in 1918-19 was about 70,000 acres less than the average of the triennium ending 1917-18, but the area that failed to mature during 1918-19 was also about 60,000 acres less than that of the triennium ending 1917-18.

Of the area irrigated under the heads Imperial and Provincial, the Productive Major Works accounted for 7,718,983 acres and the Minor Works for 666,490 acres, as compared with 7,531,316 acres and 1,068,842 acres, respectively, in 1917-18, and 7,632,536 acres and 1,018,959 acres, respectively, the averages for the triennium ending 1917-18. The figures for the Minor Works, and the Inundation Canals under Major Works, were adversely affected by the low river supplies, and climatic conditions, whilst those for the perennial canals showed improved results, except on the Western Jumna and Upper Bari Doab Canals, where the cotton and *jowar* crops suffered considerably, owing to the failure of the monsoon. The decrease on these canals was partly counterbalanced by an increase on the Lower Chenab and Triple Canals. On the former the demand for canal water was unusually keen, and the figures for the *khārif* season constitute a record. On the latter the increase was due to development of irrigation.

The areas irrigated and matured in Native States showed improvement as compared with the figures of 1917-18 and with the average of the two previous triennia. These Native States enjoy a more plentiful rainfall, which renders it easier for them to dispense with canal irrigation in certain years.

4. The area on which irrigation charges were remitted amounted to 444,542 acres as compared with 626,177 acres in 1917-18, and 6,34,413 acres in 1916-17. Deducting from these figures, respectively, 60,955, 101,814 and 175,718 acres, remitted under Tenancy rules (mostly on the Lower Bari Doab Canal) not for failure of crops, but as part of the terms of colonization, the area of crops that actually failed, either wholly or partially, amounted to 383,583 acres, or 4.25 per cent. of the area sown, as compared

with 124,363 acres, or 5.79 per cent. in 1917-18, and 423,940 acres, or 4.49 per cent. in 1916-17. Generally speaking, the percentage of remissions on all Canals appears to be decreasing progressively with the development of irrigation practice and experience. The remissions fall mainly under the following heads of classification :—

	Acres.
(a) Short supply	167,425
(b) Bad soil	82,785
(c) Other insects and blights	55,087

The area remitted under (a) was for the most part on the Inundation Canals, as was to be expected in such an abnormally dry season, accompanied by unusually low supplies in the rivers. The remissions under (b) were granted chiefly on the Inundation Canals in the Derajat Circle and on the Lower Bari Doab Canal. The damage under (c) was due to grasshoppers and other insects destroying sugarcane, cotton, rice and *jowar*, particularly on the Western Jumna and Upper Bari Doab Canals, owing to the scarcity of grass for them to feed on during July and August.

Considering that the year was one of abnormally scanty rainfall, and of an exceptionally scanty flow in the rivers, the results were satisfactory.

Financial Results.

5. The financial results are based, not on the areas irrigated during *Kharif* 1918 and *Rabi* 1918-19, but on those of *Rabi* 1917-18 and *Kharif* 1918, water dues on account of which were realized during the financial year under review. The gross receipts from works of all kinds compare as follows with the figures for the year 1917-18 and the averages of the two triennia ending 1914-15 and 1917-18 :—

Particulars.	AVERAGE OF THE THREE YEARS ENDING		During 1917-18.	During 1918-19.
	1914-15.	1917-18.		
	Rs.	Rs.	Rs.	Rs.
<i>Imperial and Provincial.</i>				
Major Works ...	3,40,31,764	3,73,41,638	3,79,02,265	4,13,14,913
Minor Works ...	16,57,540	20,10,512	21,35,091	17,00,106
Total	3,56,89,304	3,93,52,205	3,99,35,356	4,31,65,019
<i>Native States.</i>				
Major Works ...	25,21,870	26,24,971	25,90,518	22,76,164
Minor Works ...	17,551	18,120	17,873	2,304
Total	25,39,417	26,43,100	26,08,391	22,78,468

The above figures, under Imperial and Provincial, work out to an average rate of Rs. 5.3 per acre matured.

Working Expenses.—The working expenses for the year are compared below with the figures of 1917-18 and the averages of the two previous triennia—

Particulars.	AVERAGE OF THE THREE YEARS ENDING		During 1917-18.	During 1918-19.
	1914-15.	1917-18.		
	Rs.	Rs.	Rs.	Rs.
<i>Imperial and Provincial.</i>				
Major Works	69,82,131	1,10,01,946	1,11,03,853	1,10,14,431
Minor Works	9,52,001	9,61,410	8,81,776	9,55,360
Total	98,91,132	1,10,03,386	1,19,85,627	1,19,69,797
<i>Native States.</i>				
Major Works	9,11,511	10,07,888	10,52,614	8,78,548
Minor works	6,651	8,203	7,762	8,519
Total	9,18,162	10,16,091	10,60,376	8,87,067

The decrease under Major Works was due chiefly to the postponement of certain small works on account of labour difficulties resulting from the malarial and influenza epidemics which were exceptionally severe during October and November 1918.

The increase under Minor Works occurred mainly on the Lower Sutlej Inundation Canals and the Shahpur Imperial Inundation Canals. On the former it arose from the necessity of diverting the Mails and Muhammadwah Canals; and on the latter from special silt clearances.

Nett Revenue.—The nett revenue for the year compares as follows with that of the previous year :—

Particulars.	AVERAGE OF THE THREE YEARS ENDING		During 1917-18.	During 1918-19.
	1914-15.	1917-18.		
	Rs.	Rs.	Rs.	Rs.
<i>Imperial and Provincial.</i>				
Major Works	2,50,92,683	2,63,39,717	2,66,09,413	3,03,00,511
Minor Works	8,00,539	11,09,102	12,58,316	8,04,740
Total	2,59,93,172	2,74,48,819	2,78,67,729	3,11,05,251
<i>Native States.</i>				
Major Works	18,10,805	10,17,183	15,97,904	18,97,616
Minor Works	10,590	9,926	10,111	6,225
Total	18,20,955	10,27,069	16,08,015	19,01,391

The increase in the case of Major Works was attributable mainly to the development of irrigation, to the increased credit on account of the sale proceeds of Government waste and other lands irrigated by the Triple Canals, and to a credit of Rs. 17,10,221 on account of land revenue and malikana in the Montgomery District of the Lower Bari Doab Canal, which included arrears for the six previous years. Partly also to the record area irrigated by the Lower Chenab Canal during *Kharif* 1918.

The decrease under Minor Works was due to scanty rainfall and low supplies in the rivers during the *Kharif* season.

The nett revenue earned by Major Works, including indirect receipts, but excluding interest charges, amounted to 13.50 per cent. of the total capital outlay; whilst direct receipts alone yielded 7.40 per cent.

The interest charges for the year amounted to Rs. 75,68,775; and the nett profit, after defraying interest charges, was Rs. 2,27,31,736 or 10.12 per cent. of the capital outlay to date. In the previous year the corresponding figures were Rs. 1,92,15,030, or 8.60 per cent., respectively. If the direct receipts alone are considered the nett profit, after defraying interest charges, comes to Rs. 91,27,460, or 4.06 per cent., as against 3.82 per cent., in the previous year. Under the Provincial Contract this nett profit is shared equally between the Imperial and Provincial Governments; but if the half share of the Provincial Government in any one year falls short of 41 lakhs, the Government of India makes good the deficiency. The half share during the year under review comes to 45.6 lakhs, i.e., 4.6 lakhs more than the guaranteed minimum. The question of revising these Provincial Contracts is under the consideration of the Government of India, and it is anticipated that under the new terms proposed the Provincial Government will realize a larger share of the surplus.

The percentages of nett revenue on capital outlay in the case of each of the Major Works were as follows:—

Canal.	Excluding interest charges.	Including interest charges.
Western Jumna Canal	8.66	6.33
Sirhind Canal (Imperial)	6.60	9.21
Upper Bari Doab Canal	16.89	13.57
Lower Bari Doab Canal	15.55	12.15
Upper Chenab Canal	1.97	- 1.41
Lower Chenab Canal	43.65	40.41
Upper Jhelum Canal	0.14	- 3.27
Lower Jhelum Canal	20.40	17.13
Upper Sutlej Inundation Canals	25.63	23.33
Sidhnai Canal	53.52	50.43
Indus Inundation Canals	5.33	1.91

All canals showed better results than those of the previous year, with the exception of the Western Jumna, Sirhind, Lower Jhelum and Upper Chenab Canals. The decrease on the first three canals was mainly due to a decrease in area irrigated.

General Remarks.

6. The development of irrigation on the Triple Canal system has not been as rapid as was anticipated in the Project, owing mainly to a delay of about a year in the opening of the Upper Jhelum Canal. The area irrigated

by the Triple Canal system during the year under review was greater than in the preceding year, but less, by 613,198 acres, than the area forecast for this year in the Project Report. The gross receipts amounted to Rs. 74,81,679, and the working expenses to Rs. 31,90,545; resulting in a net revenue of Rs. 42,91,134 or 4.15 per cent. on the total capital outlay to date (Rs. 10,34,15,739). The Project forecast for the year was Rs. 76,03,731 for gross receipts. The nett profit, after defraying interest charges, which amounted to Rs. 35,15,934 during the year, comes to Rs. 7,75,200. This was the third year of irrigation from the complete Triplo Canal Project which has, for the first time, been able to earn a profit after paying off both its working expenses and interest charges.

7. The length of channels in operation at the end of March 1919 was 19,654 miles, viz., 4,405 miles of main and branch canals, and 15,246 miles of distributaries. Five miles of main and branch canals and 120 miles of distributaries were open for the first time for irrigation during the year.

8. The estimated value of crops raised on all canals including those of Native States, during the year under review, was Rs. 55,03,14,095 as compared with Rs. 33,36,99,916 during the previous year. These figures represent Rs. 64 and Rs. 40, respectively, per acre matured; the increase reflecting the rise in value of agricultural produce; and it may be interesting to note that the value of this year's crops amounts to 2.5 times the total capital outlay on all canals system up to date. The cultivator had to pay only Rs. 5.3 per acre for water rates on crops of an average value of Rs. 64 per acre.

9. A review of the development of canal irrigation in the Punjab shows that the area irrigated in 1864-65 was only about 750,000 acres, valued at 3 crores of rupees; whereas during the year under review the area irrigated was over 9 million acres, valued at more than 55 crores of rupees.

Fifty years ago the country was sparsely populated and subject to famine. The canals have changed all this. The population increased from 17,275,000 in 1891 to 19,975,000 in 1911, the people have become more prosperous, and the Province has been secured against famine. The canals have also contributed largely to the expansion of the railway system; and have made possible large exports of agricultural produce, which have been especially valuable during the recent war.

10. As noticed in paragraph 11 of the last year's review, further considerable extensions of canal irrigation in the Province have been under consideration. The important projects detailed therein have been maturing during the year under review. The *Sutlej Valley Project* was still under discussion with the Bahawalpur representatives. The Report on the *Bhakra Dam Project* has been received, but nothing further can be done on this Project, or on the *Haveli Project*, until the scope of the *Sutlej Valley Project* is settled finally. The Report on the *Thal Canal Project* was under preparation. The Project for the construction of the *Woolar Lake Barrage in Kashmir*, to supplement the winter water supply of the river Jhelum, was awaiting the consent of the Kashmir Darbar.

11. The posts of Chief Engineer were held during the year under review by—

	From	To
Mr. W. F. Holmes	1-4-1918	7-12-1918
Mr. H. W. M. Ives	8-12-1918	31-3-1919
The Hon'ble Mr. F. W. Woods	1-4-1919	31-3-1919

and the Lieutenant-Governor desires to thank these officers and the Department generally for their valuable services during the year. It is a peculiar gratification to him to find that the work done by Mr. Woods has since been recognized by the bestowal of the Order of the O.I.E. and he desires to congratulate both Mr. Woods and the Department on the receipt of this distinction.

By order of His Honour the Lieutenant-Governor,

F. W. WOODS,

Secretary to Government, Punjab.

ADMINISTRATION REPORT

OF THE

CANALS IN THE PUNJAB

FOR THE YEAR

1918-19.

GENERAL.

1. The direct receipts and expenditure of the Irrigation Department during the year were as follows :—

CLASS OF WORKS.		Direct Receipts.	DIRECT EXPENDITURE.		
			Capital	Working expenses.	Total.
		Rs.	Rs.	Rs.	Rs.
Major Irrigation Works.	Imperial	2,77,10,675	11,48,168	1,02,92,076	1,14,40,244
	Contributions	85,399	1,179	3,97,746	3,98,925
Minor Irrigation Works.	Imperial	8,09,596	11,799	8,92,570	9,04,369
	Contributions	...	732	2,859	3,591
Provincial Canals	...	29,464	...	36,265	36,265
GRAND TOTAL		2,86,35,084	11,61,878	1,16,21,516	1,27,83,394
Average of the three years ending 1917-18.		2,72,66,487	36,02,565	1,17,62,263	1,53,64,828

* Excludes "refunds of revenue."

2. The indirect revenue credited to the canals on account of Enhanced Land Revenue, etc., amounted to Rs. 1,45,55,293. The average credit on this account of the three previous years amounts to Rs. 1,21,59,256.

3. The following table shows the areas irrigated by the several canals in 1918-19 as compared with the averages of the previous triennium and with the figures of 1917-18:—

Area irrigated.		Average of the three years ending 1917-18.	1917-18.	1918-19.
Names of Canals.				
<i>Major Irrigation Works</i>		Acres.	Acres.	Acres.
Western Jumna Canal	{ Imperial ...	720,170	650,413	658,855
	{ Patiala State ...	72,785	74,912	61,637
Sirhind Canal	{ Imperial ...	790,191	551,731	887,875
	{ Patiala, Nabha and Jind States	498,042	350,160	537,526
Upper Bari Doab Canal	...	1,163,654	1,114,521	1,065,019
Lower Bari Doab Canal	...	473,277	621,600	678,004
Upper Chenab Canal	...	281,825	382,935	426,864
Lower Chenab Canal	...	2,232,641	2,277,125	2,339,198
Upper Jhelum Canal	...	147,305	177,006	246,669
Lower Jhelum Canal	...	801,469	765,470	777,496
Upper Sutlej Canals	...	341,251	437,857	258,499
Sidhnai Canal	...	295,716	318,412	229,397
Indus Canals	...	235,004	204,213	181,097
Total Major Irrigation Works.		{ Imperial ... 7,632,536 Native States ... 570,827	{ 7,531,316 455,072	{ 7,748,983 590,163
<i>Minor Irrigation Works.</i>				
Shahpur Inundation Canals...	{ Imperial ...	38,722	42,633	16,727
	{ Provincial ...	25,128	25,085	13,183
Ghaggar Inundation Canals	{ Imperial ...	21,052	21,823	11,472
	{ Bikanor State	7,960	8,671	1,343
Lower Sutlej Inundation Canals (including Hajiwal Canal)	...	337,517	365,184	159,916
Chenab Inundation Canals	...	201,534	229,042	126,629
Muzaffargarh Inundation Canals	...	386,976	385,075	308,563
Ravi Inundation Canals (Provincial)	...	...	...	...
Total Minor Irrigation Works.		{ Imperial ... 935,831 Provincial ... 25,128 Native States ... 7,960	{ 1,013,757 25,085 8,671	{ 653,307 13,183 1,348
Total Major and Minor Irrigation Works.		{ Imperial ... 8,621,367 Provincial ... 25,128 Native States ... 578,787	{ 8,575,073 25,085 463,743	{ 8,402,290 13,183 603,511
GRAND TOTAL		9,225,282	9,063,901	9,015,984

*Average of two years only.

Financial results.

4. The canals in the Punjab show the following results for 1918-19:—

I.—CANALS IN OPERATION CLASSED AS PRODUCTIVE.

Major Works.

Capital expenditure during the year.	{ Direct charges ..	...	Rs. 11,48,168
	{ Indirect charges...	...	58,219
Total		...	12,06,387
The capital invested to end of 1918-19 amounted to		...	22,45,11,551
Income from all sources less refunds (Rs. 8,241)		...	4,13,14,942
Working expenses less refunds (Rs. 8,241)		...	1,10,14,431
Balance excess revenue being 13.50 per cent. on Rs. 22,45,11,551		...	3,03,00,511
Interest—			
Total direct outlay to 31st March 1919		...	Rs. 21,79,55,186
Less half outlay during 1918-19		...	5,74,084
Mean Capital at charge		...	21,73,81,102
Interest on Rs. 21,73,81,102 at 3.4816 per cent.		...	75,68,775
Not profit after paying interest in 1918-19		...	2,27,31,736
Ditto ditto 1917-18		...	1,92,15,630
Ditto ditto 1916-17		...	2,16,57,594

The earnings of the Major Works are shown in line 24 of the statement at pages 4 and 5.

II.—IMPERIAL CANALS, MINOR WORKS NOT CLASSED AS PRODUCTIVE.

The capital expenditure (direct and indirect) incurred during the year on those canals for which Capital and Revenue Accounts are kept, *viz.*, Shahpur Imperial and Ghaggar Canals, amounted to Rs. 12,247. The total expenditure on such canals to end of the year was, therefore, Rs. 6,04,318.

				Rs.
The income from all sources <i>less</i> refunds (Rs. 479) amounted to	...	...	...	17,48,492
Working expenses <i>less</i> refunds (Rs. 479)	...	...	...	9,46,347
Balance profit in 1918-19	...	...	...	8,02,145
Ditto 1917-18	...	...	...	12,36,137
Ditto 1916-17	...	...	..	11,36,719

The financial results of each Minor Work are shown in the body of the report.

III.—PROVINCIAL CANALS.

There is only one Provincial Canal in operation, *viz.*, the Shahpur Provincial Canal. The Ravi Inundation Canals have now ceased to exist, but the transactions shown in column 18 of the statement at page 5 relate to some adjustments effected.

				Rs.
The income from all sources <i>less</i> refunds (<i>nil</i>) amounted to	...	...	...	41,614
Working expenses <i>less</i> refunds (<i>nil</i>)	...	...	...	39,019
Balance profit in 1918-19	...	...	...	2,595
Ditto 1917-18	...	...	...	17,179
Ditto 1916-17	...	..	...	—1,326

5. The total number of dismissals and other severe punishments was 95 as compared with 100 in 1917-18 and 110 in 1916-17. Of this total 73 were dismissals, 26 after departmental enquiry, 1 after Judicial enquiry, 32 for serious misconduct and 14 for inefficiency. In the previous year the corresponding figures were 27, 3, 23 and 30 respectively.

Other forms of punishments were inflicted in 22 cases. In 9 of these the punishment was transfer of the culprits while in the remaining 13 cases reduction in rank or pay or both, was ordered, the corresponding figures in 1917-18 having been 2 and 9 respectively.

The total of 95, as usual, does not include minor disciplinary punishments.

PARTICULARS.	Serial No	CANALS IN OPERATION CLASSED AS PRODUCTIVE.					
		Western Jumna Canal (including Sira Branch).	Sirhind Canal (Imperial).	Upper Bari Doab Canal	Lower Bari Doab Canal.	Upper Chenab Canal.	Lower Chenab Canal.
		3	4	5	6	7	8
1	2	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I.—Capital (direct and indirect) owing to end of							
1917-18 ...	1	1,76,92,829	2,50,31,880	2,18,32,283	2,24,01,550	3,57,76,506	3,25,18,571
1918-19 ...	2	1,77,11,686	2,50,88,854	2,23,96,782	2,26,46,199	3,57,09,557	3,24,90,216
II.—Income realized during the year—							
Direct, viz., water rent and miscellaneous receipts.							
1917-18 ...	3	30,88,557	33,36,816	42,28,782	18,60,745	19,01,419	85,57,059
1918-19 ...	4	26,50,418	27,00,230	44,10,235	22,07,317	18,08,156	89,44,064
Indirect, viz., land revenue due to Irrigation Works, including water-advantage rate.							
1917-18 ...	5	2,30,270	98,174	7,13,848	2,92,002	3,53,050	07,00,092
1918-19 ...	6	2,18,741	98,480	0,87,183	24,86,522	1,10,140	76,80,183
Total Direct and Indirect							
1917-18 ...	7	39,18,833	94,55,019	49,42,190	16,43,847	28,45,009	1,52,08,175
1918-19 ...	8	29,75,154	29,57,710	51,06,423	49,43,829	19,87,886	1,66,24,217
III.—Charges (direct and indirect) for the year—							
Maintenance, including Establishment.							
1917-18 ...	9	13,70,721	12,54,402	18,34,188	9,13,557	10,56,013	24,60,511
1918-19 ...	10	13,41,447	11,81,808	18,22,909	11,71,901	12,50,998	29,74,970
Interest on Capital owing							
1917-18 ...	11	5,80,344	8,47,427	7,82,708	7,52,906	12,00,642	10,99,523
1918-19 ...	12	5,63,144	8,51,223	7,44,378	7,63,852	12,10,823	11,04,710
Total							
1917-18 ...	13	19,57,065	21,01,919	20,66,899	10,67,763	22,87,255	35,00,084
1918-19 ...	14	19,20,591	20,38,693	20,90,582	10,40,780	24,01,810	34,79,030
Profit and Loss—							
(a) Including Interest on Capital outlay.							
Amount							
1917-18 ...	15	13,50,769	13,33,100	23,75,291	—24,416	57,814	1,17,03,141
1918-19 ...	16	9,45,568	8,34,620	30,97,841	27,53,053	—5,04,494	1,31,44,561
Percentage on Capital outlay.							
1917-18 ...	17	7.07	5.20	13.17	—0.11	0.16	35.69
1918-19 ...	18	5.33	3.34	13.57	12.15	—1.41	40.44
On Direct Income							
Amount							
1917-18 ...	19	17,12,830	20,82,858	23,94,619	4,40,898	9,04,500	60,03,572
1918-19 ...	20	12,14,058	15,87,362	30,90,926	10,35,418	5,57,190	65,60,038
Percentage on Capital outlay.							
1917-18 ...	21	9.68	8.12	18.20	2.00	2.52	18.75
1918-19 ...	22	7.42	6.18	19.88	4.57	1.64	20.21
On total income, Direct and Indirect.							
Amount							
1917-18 ...	23	10,43,112	21,80,527	30,07,397	7,29,490	12,58,450	1,28,02,064
1918-19 ...	24	15,33,707	10,85,848	37,54,114	35,21,085	7,06,889	1,42,42,271
Percentage on Capital outlay.							
1917-18 ...	25	10.98	8.51	16.52	3.24	3.52	39.37
1918-19 ...	26	8.68	6.66	16.80	15.55	1.87	43.85

Financial results.

MAJOR WORKS.					Total Productive.	IMPERIAL CANALS, MINOR WORKS, NOT CLASSED AS PRODUCTIVE.		PROVINCIAL CANALS.		Serial No.
Upper Jhelum Canal.	Lower Jhelum Canal.	Upper Entief (including Lower Sohag and Para).	Siddhant Canal.	Indus Inundation Canals.		Works for which Capital and Revenue Accounts are kept.	Works for which only Revenue Accounts are kept.	Shahpur Provincial Canals.	Ravi Inundation Canals.	
9	10	11	12	13	14	15	16	17	18	19
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
4,50,87,813	1,62,25,129	18,17,323	13,82,237	29,80,763	22,33,05,164	5,92,071	...	...	...	1
4,48,99,973	1,66,77,579	18,12,296	13,30,674	29,81,745	22,45,11,531	6,01,318	...	...	...	2
5,57,093	27,90,507	4,99,500	5,44,468	1,04,850	2,71,21,755	1,17,735	8,81,477	48,501	...	3
8,00,505	26,82,019	5,52,759	6,69,680	2,00,517	2,77,10,075	73,756	7,35,840	20,484	...	4
...	18,39,652	2,51,723	1,67,157	2,46,840	1,00,78,519	40,396	10,28,821	10,932	-1,776	5
...	16,91,182	2,89,150	2,02,893	2,29,273	1,86,01,267	20,618	9,18,278	12,130	...	6
5,87,993	41,29,169	7,53,231	7,01,625	4,41,090	3,78,03,271	1,53,133	19,10,301	98,483	-1,776	7
8,00,505	42,77,101	8,40,909	8,11,923	4,29,780	4,13,14,912	91,874	10,51,118	41,614	...	8
2,27,495	9,15,705	3,82,314	1,58,769	8,99,182	1,11,03,852	95,212	7,37,055	47,607	1,871	9
7,97,615	8,60,215	3,76,397	95,788	2,70,880	1,10,14,431	84,801	8,61,516	39,019	...	10
15,18,063	5,44,816	59,050	41,028	1,00,757	74,54,792	...	...	...	...	11
15,36,229	5,53,356	59,070	41,558	1,01,002	75,08,775	...	...	...	...	12
28,41,168	14,60,611	4,41,964	2,03,697	4,99,939	1,55,88,211	95,212	7,37,096	47,007	1,871	13
22,78,874	14,19,071	4,36,067	1,40,740	3,71,898	1,55,83,206	81,801	8,61,546	39,019	...	14
-18,03,165	29,68,543	3,03,270	4,97,928	-59,110	1,92,15,030	...	...	...	...	15
-14,73,369	23,56,080	4,01,842	0,71,177	57,002	2,27,31,736	...	...	...	...	16
-4 00	18 29	16 40	37 88	-1 95	8 60	...	...	...	...	17
-3 27	17 18	22 38	50 48	1 34	10 12	...	...	...	...	18
-2,89,502	18,74,742	-1,10,192	3,85,099	-2,04,032	1,60,20,003	22,523	1,44,393	894	-1,871	19
62,860	18,22,701	1,76,862	5,19,742	-70,360	1,66,96,214	-11,045	-1,35,700	-9,535	...	20
-0 84	11 55	0 89	28 95	-0 85	7 17	8 80	...	...	...	21
6 14	10 03	9 73	38 61	-2 80	7 40	-1 81	...	...	...	22
-2,89,502	25,13,394	3,67,920	5,42,856	42,508	2,60,09,422	62,021	11,73,216	20,836	-3,047	23
02,860	24,10,886	4,04,572	7,10,135	1,63,904	3,03,00,511	9,573	7,92,572	2,505	...	24
-0 84	21 05	20 24	40 75	1 42	11 05	10 63	...	...	...	25
14	20 49	25 08	53 82	5 83	13 50	1 56	...	...	...	26

Major Irrigation Works. WESTERN JUMNA CANAL.

(SUPERINTENDING ENGINEER—MR. G. C. LAURIE.)

1. *Imperial*.—The expenditure (direct and indirect) amounted to Rs. 19,157 and was incurred mainly on stock transactions. Under works the expenditure was Rs. 1,985 only but that was more than counter-balanced by a credit of Rs. 5,042 on account of the value of land surrendered. The expenditure was incurred on constructing new out-houses for the Sub-Divisional officer's residential quarters at Sirsa.

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

The total outlay to date was Rs. 1,77,11,686.

2. The expenditure amounted to Rs. 1,16,554 (Rs. 96,786 Imperial and Rs. 19,768 Contribution) and was incurred on numerous works for increasing the efficiency of the canal. The important works carried out were:—Extension of the training work known as the "Chhajja pitching" at Tajawala; constructing the Dhumra inlet in the Main Branch; and the new head regulator for Patwar and Hissar distributaries.

Extensions and Improvements

3. The expenditure amounted to Rs. 5,70,254 (Rs. 5,45,795 Imperial and Rs. 24,459 Contribution). In addition to this Rs. 21,689 and Rs. 25,283 were also spent by the Patiala and Jind States, respectively, on the maintenance of their distributaries. Apart from ordinary repairs and maintenance of channels and buildings numerous works were carried out for increasing the efficiency of the canal and improving the banks of the channels.

Maintenance and Repairs.

4. (a) *Kharif*.—The season started badly as the monsoon rains, with the exception of a few showers early in June, commenced only in the middle of August, lasted for a fortnight and failed entirely thereafter. The improvement in the latter half of August was, therefore, not sustained and the season ended badly.

Nature of season and state of demand
and supply—
Kharif, 1918
Rabi, 1918-19.

The canal was in flow for 167 days. The demand was generally keen and supply sufficient to meet it, although the river was considerably below its average. There were no high floods in the river; the highest gauge registered being 24.8 feet at Ponta on the 21st August against the maximum recorded flood of 38.5 feet on the 14th August 1903.

(b) *Rabi*.—The supply fell early in the season to less than the demand owing to the very poor monsoon rainfall and its early cessation.

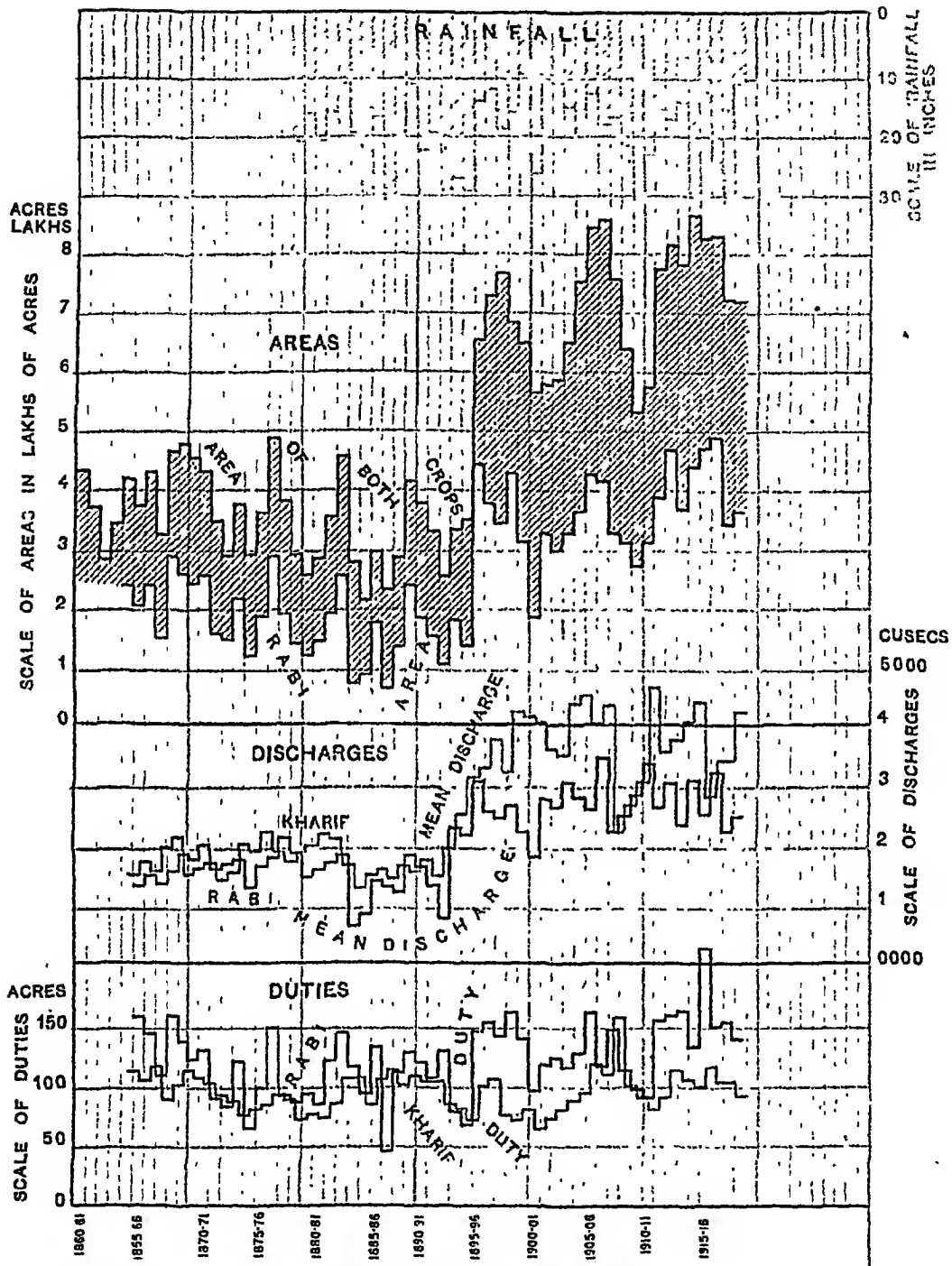
Winter rains commenced at the end of January and continued during February and March, doing considerable benefit to the crops. These rains made a closure of the canal possible which was much needed and so reduced the demand for water that the supply was sufficient during the latter part of the season. The canal was in flow for 162 days and was closed for 20 days owing to cessation of demand.

(c) *Rainfall*. The following table compares the rainfall during the year with that of 1917-18 and with the average of the years previous to 1917-18:—

Station.	1918-19.	1917-18.	Average previous to 1917-18.
	Inches.	Inches.	Inches.
Ponta	39.37	98.15	57.9
Tajawala	36.25	91.9	53.2
Dadupur	29.43	65.9	41.6
Indri	14.26	31.3	28.4
Karnal	21.83	35.2	26.0
Munak	16.45	31.4	22.0
Delhi	12.37	32.8	20.2
Rohtak	8.89	33.2	17.0
Hissar	9.22	37.5	18.8

WESTERN JUMNA CANAL.

WORKING RECORD. 1918-19.

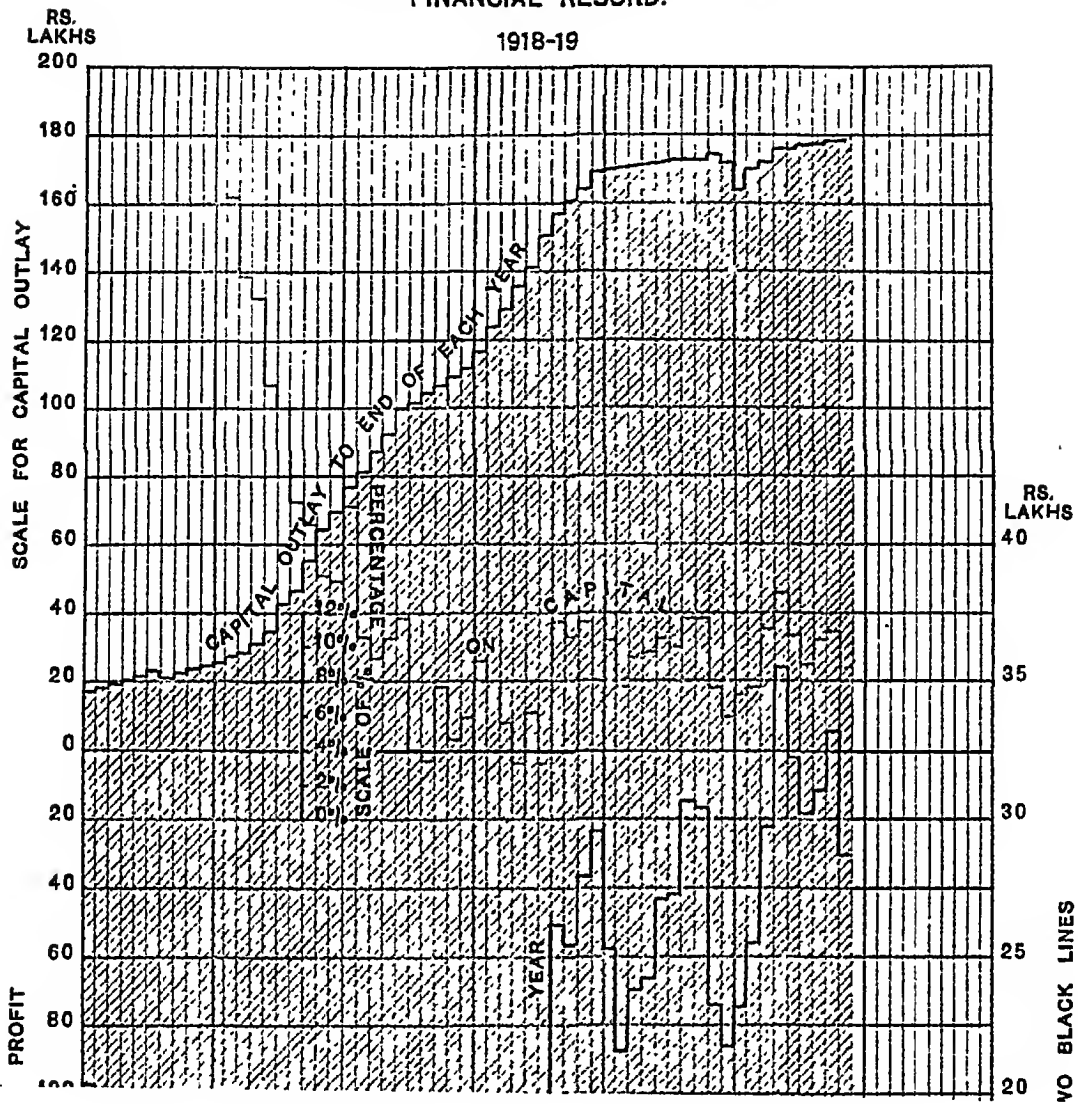


N. B.—The intercepts in the red area show the Kharif acreage each year.
 The areas shown include those done in Patiala State on Sirsa, Branch.
 The discharges are as measured at canal head, and are averages utilised for the whole of each crop.
 The duties are derived from the above areas and discharges.

WESTERN JUMNA CANAL.

FINANCIAL RECORD.

1918-19



5. The following table shows the irrigation effected during 1918-19 as compared with the averages of the previous triennial periods :—

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

CROP.	AVERAGE FOR THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
Kharif	400,628	360,763	373,102	349,172
Rabi	425,146	432,192	352,223	371,360
Total	825,774	792,955	725,325	720,532

The reduction in the area of irrigation in the *kharif* was due to the early failure of the cotton crop owing to its having been eaten up, as is usually the case in hot weather, by grass-hoppers, a calamity which disheartened the zamindars and disinclined them to sow other crops. Only a small area of fodder crops was put down, though fodder was badly wanted, the zamindars holding off in the hopes of rain.

The influenza epidemic during October and November and the early failure of the supply in the river were responsible for the poor *rabi* crop.

6. The receipts amounted to Rs. 66,117 and maintenance charges to Rs. 6,265, showing a nominal profit of Rs. 59,852 against Rs. 52,541 in 1917-18 and Rs. 68,329 in 1916-17.

Navigation.

No boats are now plying for hire on the canal, the only navigation being raft traffic from the hills and boats for carriage of Government material, and a few boats plying in connection with the Flour Mills on the Main Branch.

7. *Imperial.*—The gross revenue was Rs. 28,75,154 and the working expenses Rs. 13,41,447, giving a net revenue of Rs. 15,33,707 as compared with Rs. 17,79,926, the average of the previous triennium and Rs. 19,43,112 of the previous year. The decrease was due to the decrease in the area irrigated in both the crops under reference (*rabi* 1917-18 and *kharif* 1918) the former being due to the heavy rainfall in October 1917 which enabled the zamindars to put down larger *baram* area while the latter was attributable to the almost entire failure of the monsoon as mentioned above.

Financial results based on collection—
Rabi, 1917-18.
Kharif, 1918.

Contribution.—The net revenue received by the Patiala State on their channels on the Sirsa Branch amounted to Rs. 1,97,075 or 16.98 per cent. on the capital cost invested, against an average of Rs. 1,62,968, or 14.04 per cent., for the triennium ending 1917-18, and Rs. 2,20,460 or 19.00 per cent. of the previous year.

8. (a) *Agricultural and other conditions of the year.*—The canal remained in flow for 320 days and was closed at its head for 36 days (16 days in *kharif* and 20 days in *rabi*). The supply was equal to the demand during earlier part of the *kharif* but became insufficient towards the middle of September so that the *kharif* crops had to be matured and *rabi* crops sown on an insufficient supply. The cultivators gave the water to their *kharif*, hoping to sow *rabi* crops later, but owing to the influenza epidemic in October and November, which attacked 75 per cent. of the cultivators and caused the death of about 20 per cent. of them, the *rabi* crops could not then be sown fully, and by the beginning of December the supply of water was insufficient. Swarms of

General remarks.

the young crops during *kharij* as there was no grass
 upon was the principal crop destroyed by them but
 ably. Sugarcane also failed as the seed became
 The whole of the area which was sown at the
 wheat.

ture of the sugarcane crop the Principal of
 was approached and was good enough to
 vators as to what they should do to prevent

nine, which threatened early in the
 very small area was put under fodder
 middle of August, partly from fear
 the crops during the long hot
 gambled unsuccessfully on
 fodder crop was so serious
 trees and date-palms all
 cattle and goats, and
 from this cause.

granted remission in
 The failure in
 beneficial rainfall

Rs. 1,13,62,157

made on
 level cross
 obtaining

(iii) Towards the end of the year a new division with headquarters at Dadnpur was sanctioned for the control of the Headworks and Main Line. This Division was opened from 2nd April 1919 and should be of very great assistance by enabling the Executive Engineer, Karnal Division, to devote his attention to irrigation in the Karnal District. The irrigation in Karnal District on Sirsa Branch, formerly in the charge of the Executive Engineer, Hissar Division, will now be transferred to the Karnal Division, and this should have very beneficial results.

(iv) A new and much simplified system of dealing with the rafting traffic at Headworks was sanctioned by the Local Government and was brought into force during the rafting season of the year under review. The timber is made up into rafts of a standard size and the charge is made per raft instead of checking dimensions of each single piece of timber. The revised method has been most beneficial to all concerned.

(v) It has been decided to construct Government offices and residential quarters for the Executive Engineer at Rohtak as the accommodation otherwise available is not suitable.

IRRIGATION IN NATIVE STATES.

Irrigation in Patiala State.—The irrigation in Patiala State from the Sirsa Branch during the year was 36,152 acres in *kharif* and 25,017 acres in *rabi* or a total of 61,169 acres exclusive of 465 acres; half of this area was remitted in *kharif* and half in *rabi*. The average area assessed for the two last triennia ending 1917-18 and 1914-15 were 72,551 and 66,667 acres, respectively.

Irrigation in Jind State.—The supply which the Irrigation Branch has undertaken to allow the Jind State is 353 cusecs, intended to irrigate an area of 60,000 acres annually. The area actually irrigated was 56,400 acres. The reduction in the area was due to the same causes as had reduced the area in British Territory.

The average areas irrigated during the two previous triennia, ending 1914-15 and 1917-18, were 64,058 and 60,602 acres, respectively. Besides the area recorded above an average of about 1,000 acres of irrigation is done in the Jind State from the Bhiwani distributary which is assessed at the water rates prescribed for British areas on this canal.

Maintenance and assessments on all Jind State distributaries are controlled by State officials. The following table shows the working of the Jind State distributaries as reported by the State:—

Particulars.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Receipts.</i>					
Occupiers' Rates	2,88,098	2,02,054	2,68,054	2,04,010	2,40,549
Miscellaneous	5,088	5,078	5,300	4,015	2,738
Total	2,94,081	2,07,782	2,63,354	2,08,025	2,52,286
<i>Working expenses.</i>					
Establishment	7,817	7,807	10,491	11,300	12,014
Other expenses	28,855	31,776	21,670	14,894	25,258
Occupiers' rates paid into British Treasury ...	1,31,000	1,31,000	1,31,000	1,31,000	1,31,000
Total	1,67,182	1,70,173	1,63,167	1,62,234	1,68,272
Profit or loss	+1,26,899	+97,559	+1,00,187	+1,36,801	+83,959

The above amount shows a profit of Rs. 83,959 against a profit of Rs. 1,33,891 in the previous year.

grass-hoppers ate up all the young crops during *kharif* as there was no grass for them to feed on. Cotton was the principal crop destroyed by them but *jowar* also suffered considerably. Sugarcane also failed as the seed became rotten owing to late sowing. The whole of the area which was sown at the proper time was put under *barani* wheat.

In consequence of the failure of the sugarcane crop the Principal of the Lyallpur Agricultural College was approached and was good enough to send an expert who advised the cultivators as to what they should do to prevent any further failure of this crop.

Notwithstanding the fodder famine, which threatened early in the crop and grew very acute later on, only a very small area was put under fodder crops and even this was not sown until the middle of August, partly from fear of the grass-hoppers, which were damaging the crops during the long hot and dry season and partly because the zamindars gambled unsuccessfully on the arrival of the monsoon. The failure of the fodder crop was so serious that the cultivators were driven to stripping *kikar* trees and date-palms all over the canal area in order to obtain food for their cattle and goats, and considerable damage resulted to the canal plantations from this cause.

Altogether nearly 27,000 acres of crops had to be granted remission in the *kharif* crop, or nearly 7·5 per cent. of the whole crop. The failure in the *rabi* crop was, however, exceedingly small owing to the beneficial rainfall received during the last two months of the crop.

The value of crops assessed to water rates amounted to Rs. 4,13,62,157 which shows that the canal is a very valuable asset to the country.

(b) *Nature and scope of new works contemplated and progress made on the preparation of new Projects.*—(i) Project for the proposed new level crossing at Dadupur was held in abeyance on account of impossibility of obtaining iron work at a reasonable rate owing to the war.

(ii) There are proposals under consideration for remodelling the Head-works at Tajawala but these were also held in abeyance for the reason given for (i) above.

(iii) A project has been worked out for the substitution of minors direct water-courses for irrigation near Tajawala, but it is held up for want of funds.

(iv) The work of re-designing the existing old channels on scientific principles and gradually remodelling them is being carried forward systematically as funds permit.

(v) The opening up of the Indri Singhoa Out in the Indri Escape divert escapse water which has hitherto blocked the drainage of logged lands above Indri was also held up owing to scarcity of funds. Several proposals had been formulated and approved.

The construction of a new rest-house at Kharak on Butana Branch, received the approval of the Local Government, was also postponed.

Resting facts relating either internally or externally to the timber traffic at Jagadhri Railway Station has developed during the last two years and this is now one of the most important markets in the Province and very extensive additional work has been made by the Railway to cope with it. This timber is carried on the Main Line of the canal from the Jumna river to the

the very heavy and unexpected flood of October 1917, the mass of sleepers lying at the river sides for removal was not replaced till late in 1918, so that up till about February the canal was at a standstill; after that it was difficult to cope with it, and it endangered the canal

the difficulty of obtaining coal has considerably interfered with the work required for works on the canal.

(iii) Towards the end of the year a new division with headquarters at Dadupur was sanctioned for the control of the Headworks and Main Line. This Division was opened from 2nd April 1919 and should be of very great assistance by enabling the Executive Engineer, Karnal Division, to devote his attention to irrigation in the Karnal District. The irrigation in Karnal District on Sirsa Branch, formerly in the charge of the Executive Engineer, Hissar Division, will now be transferred to the Karnal Division, and this should have very beneficial results.

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<i>Receipts.</i>					
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The above amount shows a profit of Rs. 83,959 against a profit of Rs. 1,33,891 in the previous year.

Irrigation in Bikaner State.—The Western Jumna Canal is intended also to irrigate 460 acres annually in Bikaner State from the tail of Hissar distributary. The areas actually irrigated were 267 acres in *kharij* and 11 acres in *rabi* or a total of 278 acres. This area pays the ordinary occupier's rates and is assessed by the Canal Department. The deficiency in irrigation was due to the same causes as operated in British Territory.

Irrigation in Kalsia State.—The irrigation in Kalsia State from Main Line of the canal was 1,100 acres in *kharij* and 1,291 acres in *rabi* or a total of 2,391 acres exclusive of 39 acres remitted in *kharij* and 14 acres in *rabi*.

This area also pays the ordinary occupier's rates and is assessed by the Canal Department. The average area assessed for the last 3 years has been 766 acres in *kharij* and 757 acres in *rabi* or a total of 1,523 acres.

SIRHIND CANAL.

(SUPERINTENDING ENGINEER—MR. E. R. FOR.)

1. (a) *Imperial*.—The expenditure (direct and indirect) amounted to Rs. 64,048, but it was reduced to Rs. 57,474 by a credit of Rs. 6,574 on account of value of material obtained from dismantling the Lock gates of the Sutlej Navigation Channels. The heavy expenditure of Rs. 54,643 under the suspense account was necessary to create a reserve of stone at Rupar, to manufacture bricks and to bring on stock the above material of the Locks. The remaining expenditure was incurred on constructing the new Rohira and Kanganwal distributaries for the Maler Kotla State and new servants' quarters for Superintending Engineer's quarters at Ambala and on converting a foot bridge into a cart bridge at mile 73, Bhatinda Branch.

Capital Account—
Kharij, 1918.
Rabi, 1918-19.

(b) *Contribution*.—The expenditure of Rs. 1,179 represented the share borne by the Signatory States, of the expenditure incurred on the Headworks and Main Line.

2. (a) *Imperial*.—The expenditure amounted to Rs. 81,160 as compared with Rs. 70,432 in the previous year and was spent chiefly on improving distributaries by raising and widening sunken bridges; remodelling distributary head regulators and on other petty works such as raising mill shoots, improving minor buildings and rebuilding the notches of a fall at mile 76, Bhatinda Branch.

Extensions and Improvements.

(b) *Contribution*.—A sum of Rs 75,960 was spent, of which Rs. 70,635 represented seigniorage charges and the remainder was a small amount partly representing the share of the expenditure on the Headworks and Main Line and partly the expenditure which was incurred on minor improvements to buildings and on building gauge wells.

3. (a) *Imperial*.—The expenditure was only Rs. 4,41,820 as compared with Rs. 5,31,468 in the preceding year. This appreciable drop was due to the satisfactory condition of the torrent works on which so much had been done in the last few years. Beyond the ordinary annual repairs, expenditure was also incurred under special estimates in putting patrol roads, canal and distributary banks into good order; on some special protection at the junction of the Sugh and Budki Torrents; and in bringing irrigating channels into efficient working order.

Maintenance and Repairs.

(b) *Contribution*.—The expenditure of Rs. 1,30,99 against Rs. 2,28,437 in the previous year was incurred on the maintenance of the Native States' Branches and in the share of expenditure on the Headworks and Main Line. Here too the decrease results from smaller expenditure in the Rupar Division on repairs to torrent works.

4. The *kharif* season was remarkable for the almost total failure of the monsoon, the rainfall being generally less than half the normal. After the rain in April, which was over normal, practically no rain fell except in the third week of August. The figures by districts were—

Nature of the season, state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

District.	Rainfall April to September.	Normal, April to September.
Ludhiana	7.06	16.31
Ferozepore	4.80	11.84
Native States	9.80	15.54

This dry monsoon hit the cultivators hard because—as always happens in a year following one of good rainfall (such as 1917-18 was) — the people took no interest in early *kharif* sowings partly by reason of their being busy in harvesting the large *rabi* crop of 1917-18, and partly because having had a good harvest they trusted to luck to get another—consequently canal-irrigated sowings up to the end of June were abnormally low, but the demand for water became intense in July and continued so through August and September. The final *kharif* area was good although the poor monsoon had adversely affected the supply in the river. Rotational turns began a month earlier than usual, and there being no grass for cattle, water had to be used to mature the large *kharif* area for fodder. *Rabi* sowings were consequently backward and were further delayed by the terrible influenza epidemic, which laid low the whole countryside, and such water as was available in late October and early November could not be used by the people to the best advantage. The subsequent winter rains were timely and slightly over normal over most of the tracts served by the canal. Considering the adverse conditions at sowing time, and that there were no *barani* areas to pick up later, the area irrigated during *rabi* was satisfactory.

The canal was closed only 12 days in the whole year, of which 10 days were in the early months for lack of demand and 2 days after the rainfall of August. The canal ran throughout the *rabi*.

Rainfall.—The following table compares the mean rainfall of the year by seasons and districts over the irrigated tract with the average mean of 35 years :—

District.	Crop.	RAINFALL.		Percentage of actual to average of 35 years.
		1918-19.	Average of 35 years.	
Ludhiana	<i>Kharif</i> , 1918 ...	7.96	16.31	
	<i>Rabi</i> , 1918-19 ...	4.25	3.95	
Total ... ..	...	12.21	20.26	60%
Ferozepore	<i>Kharif</i> , 1918 ...	4.80	11.84	
	<i>Rabi</i> , 1918-19 ...	8.33	2.29	
Total ... ..	...	8.13	14.13	58%
Native States	<i>Kharif</i> , 1918 ...	9.80	15.54	
	<i>Rabi</i> , 1918-19 ...	2.68	3.20	
Total ... ..	...	12.48	18.74	67%

5. The following table compares the irrigation effected in each crop with the two previous triennia and with the figures of 1917-18 :—

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

Crop.	AVERAGE OF THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
BRITISH BRANCHES.				
Kharif	337,234	277,062	207,435	308,510
Rabi	550,578	512,229	341,209	531,365
Total	893,812	790,191	551,734	887,875
NATIVE STATES' BRANCHES.				
Kharif	185,059	190,205	168,368	218,910
Rabi	293,020	301,837	211,702	318,616
Total	478,079	498,042	380,160	537,526
BRITISH AND NATIVE STATES' BRANCHES.				
Kharif	522,195	474,167	375,803	525,420
Rabi	840,604	814,066	556,091	899,981
Total	1,372,497	1,288,233	931,894	1,425,401

From the above statement it will be seen that with regard to irrigation the year under review was a very favourable one as compared with 1917-18 and the two previous triennia. It appears desirable to remark here that the weather conditions were abnormal in 1917-18 when the rainfall was more than double the normal while the area irrigated was less than $\frac{2}{3}$ of the normal average. It will, therefore, be rather misleading to compare the figures of the year under review with those of 1917-18 and of the average of the triennial period ending 1917-18; the latter was also upset by the abnormal conditions of the former. However, for the whole canal the area irrigated was practically the same as in 1916-17 when the area irrigated was 1,425,740 acres, which has only been exceeded three times. During *kharif* sowings were retarded for the reasons explained in paragraph 4 *supra* and yet the area was the third highest on record the highest being in 1914-15 when 555,203 acres were irrigated, followed by 544,774 acres in 1916-17. The reason for the increase was the failure of the rains early in September 1918 whereby a large *barani* area was brought under canal irrigation.

British Branches.—In the *kharif* season the area was slightly below the average of the triennium ending 1914-15 for the reason already given, *i.e.*, of neglect of sowings early in the year. The *rabi* area of 531,365 acres was up to the average having only been exceeded four times, and the total for the two crops was satisfactory.

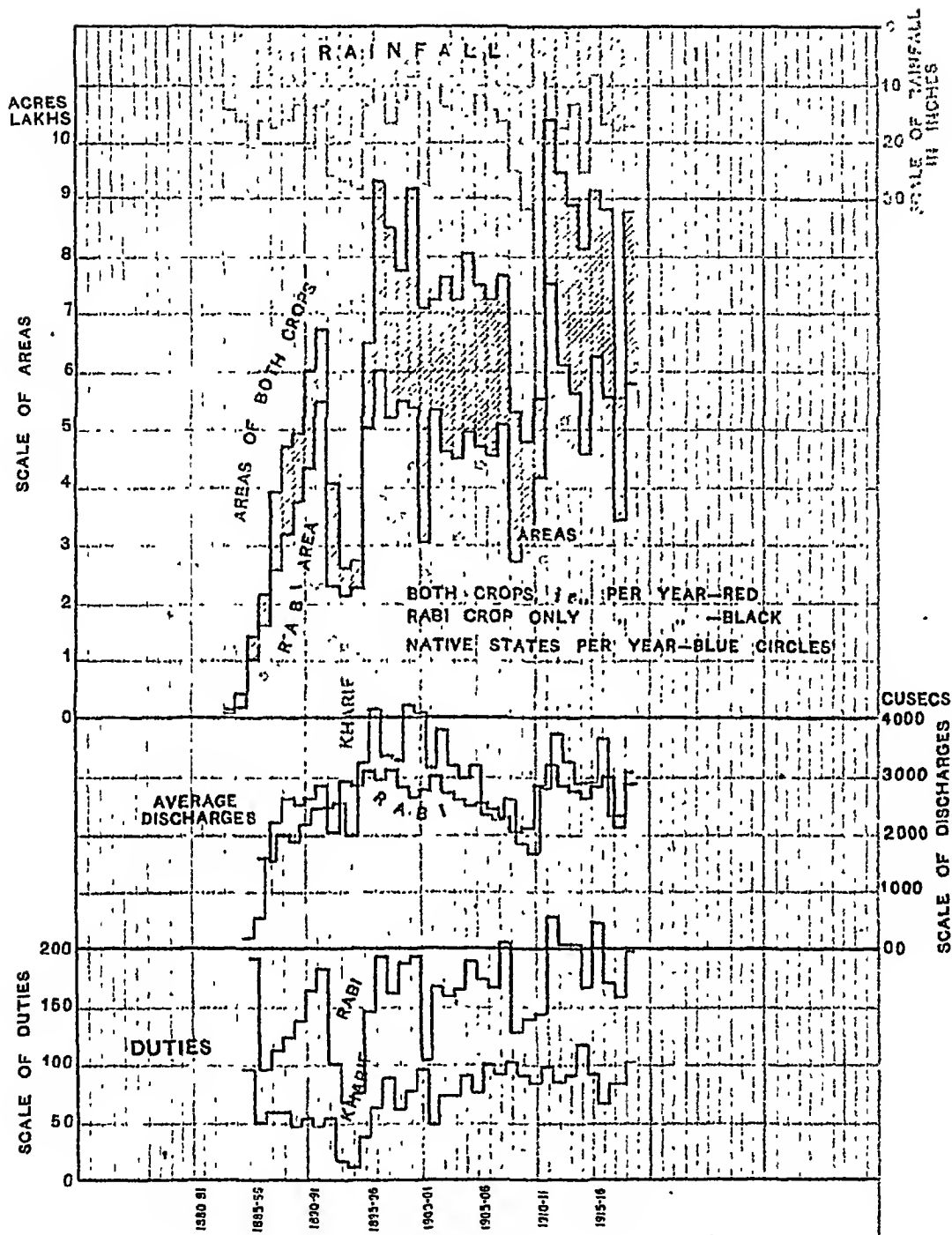
Native States' Branches.—Did the best *kharif* on record but fell off somewhat in the *rabi*.

The Native States are entitled to 36 per cent. of the whole irrigation but they have actually done 37.71 per cent. during the year.

SIRHIND CANAL—BRITISH.

WORKING RECORD.

1918-19.



N. B.—The intercepts in the red area give the Kharif acreage each year.

The small areas of 1892 to 1896 were partly due to silt difficulties, but chiefly to heavy rain. The working is more or less unsteady always.

The discharges are measured in main line 20 miles from the head. Of the whole supply 36% goes to Native States, not included here; so that the discharges here shown are only 64% of the actual flow.

These States ought therefore to do areas equal to $\frac{2}{3}$ ths of those shown above. The actual areas done for both crops are shown for comparison by blue circle, and it will be seen that owing to less efficient management they have done less than half the British, instead of $\frac{2}{3}$ ths. In winter the whole river is taken in; in Kharif the supply is more than enough, but the demand is then always low.

~~considering that an expensive storage reservoir costing Rs. 3,93,74,490 has~~

Navigation.

6. The details of traffic in tonnage and receipts are shown in the following table :—

Particulars.	1917-18.	1918-19.
Tonnage carried	20,218	34,200
Value of tonnage	11,17,313	13,45,984
Toll receipts and raft dues	16,905	17,892
Maintenance charges	7,553	3,900
Number of passengers carried	16,359	30,198

The large increase in the number of passengers carried was due to there being no long closures this year.

7. (a) *British Branches*.—The net revenue after deducting working expenses amounted to Rs. 16,85,848, giving a return of Rs. 6.56 per cent. on the capital cost. The corresponding figures for the previous year were Rs. 21,80,527 and 8.51 respectively. The decrease in the percentage was due to—

(a) the poor *rabi* area in 1917-18 collections for which were made in 1918-19;

(b) an uncollected balance of Rs. 1,52,022 for which the Native States were responsible.

If the latter had been paid into British Treasuries in time, the return for the year would have been Rs. 7.15 per cent. Even this figure would be the lowest for seven years past.

The working expenses were Rs. 11,81,868 or Rs. 72,623 less than in the preceding year, working out to Rs. 1.33 per acre irrigated against Rs. 2.27 the highest on record in the previous year.

(b) *Native States' Branches*.—The following table compares the figures for the present and previous years in collections, assessments, areas assessed and profits :—

YEAR.	AMOUNT OF REVENUE.		Area assessed.	PROFIT ON	
	By collection.	By assessment.		Collection.	Assessment.
	Rs.	Rs.		Rs.	Rs.
1917-18	22,61,944	17,15,525	379,080	9.20	5.38
1918-19	19,76,107	24,07,552	536,338	8.38	12.02
More or less	-2,85,837	+7,82,027	+1,57,258	-0.82	+6.64

8. (a) *Projects*.—(i) *The Suttaj Dam Project otherwise known as the Bhakra Dam Project*.—The designing and estimating of the whole scheme was finished and the Project Division closed on 31st March 1919. The complete Project is now under the consideration of Government. The total cost, direct and indirect, and including interest at 5 per cent. during construction is estimated to be 1474 lakhs and it is anticipated the scheme will pay 7 per cent. which is satisfactory considering that an expensive storage reservoir costing Rs. 3,93,74,490 has

General remarks.

to be made before water becomes available for irrigation purposes. The area of new irrigation expected annually will be 2,120,432 acres.

Discharge observations were continued at Bhakra for the Sutlej. A new recording station was started at Pang on the Beas in a situation similar to that at Bhakra. It is most fortunate that this was done in 1918-19 as we now have, for the lowest river supply on record, actual observed daily discharges, from which an accurate discharge curve has been plotted. We are now in a position to state with confidence the carrying capacity of the Beas under the worst conditions, occurring probably about once year in fifty, and can show that in the months of August when all spare Sutlej water will be utilized for filling the reservoir there will be enough water in the Beas for all the canals of the Sutlej Valley series without material assistance from the Sutlej.

(i) A project for a *kharif* distributary from mile 31, left of the Sutlej Navigation Channel, to irrigate near Perozepore, was under preparation, and the estimate was approaching completion. It is proposed to use the surplus water passed down the Sutlej Navigation Channel, which ordinarily runs to waste, to work some mills.

(ii) Work on the Project for the Rohira and Kanganwal distributaries referred to last year was approaching completion. The Kanganwal will irrigate in the *kharif* of the current year (1919).

(b) *Areas of principal crops on British Branches.—Sugarcane.*—Area assessed 6,479 acres against 3,516 in the previous year. The fodder famine of 1918 resulted in the sale of fields of standing sugarcane at Rs. 250 per acre, as fodder, a remarkable source of profit to the owners, who received a record price without the trouble of harvesting or extracting sugar.

Cotton.—Area assessed 16,740 acres against 14,898 in the preceding year. American cotton was introduced on a small scale, an innovation which has borne fruit in 1919, in which an enormously increased area has been put under the crop.

Wheat.—Area assessed was 261,873 against 197,267 in 1917-18 (an abnormally low year) and 257,582 in 1916-17, a good average year.

(c) The *agricultural conditions* were favourable for irrigation operations but bad for areas unprotected by canals. As already stated the rainfall in the monsoon months was from 1-3rd to half the normal. The *rabi* rainfall was timely and good and reduced remissions to a very low figure. The total area on which remissions were granted on the British Branches was 5,434 acres against 10,539 and 10,242 in the two previous years.

Influenza in epidemic form ravaged the whole tract served by the Sirhind Canal. It was at its worst for only a fortnight but the after-effects were felt for weeks, while the enormous fatalities sadly reduced the capacity of the people for utilizing the facilities for irrigation.

UPPER BARI DOAB CANAL.

(SUPERINTENDING ENGINEER—MR. F. T. BATES.)

1. The expenditure (direct and indirect) on works excluding
 Capital Account—
Kharif, 1918. Suspense amounted to Rs. 10,646 against
Rabi, 1918-19. Rs. 29,450 in the previous year and was incurred on constructing quarters for European Upper Subordinates at Amritsar and for Zilladars, Munshis and peons at Jhedu.

The Suspense account showed a debit balance of Rs. 5,53,23 as compared with a credit balance of Rs. 35,760 in the previous year.

2. Expenditure amounted to Rs. 90,768 against Rs. 69,860 in the previous year, and was incurred chiefly on
 Extensions and Improvements. improving the Kashmir canal, the Daftu road bridge on the Main Branch Lower, the Lashkari-Nangal, Baggeh and Majitha-Hudiara drains and the Khaira distributary.

3. Expenditure amounted to Rs. 4,92,824 against Rs. 5,02,573 in 1917-18 and was incurred on ordinary annual maintenance, and on special repairs to the following:—River works, canal headworks, canal and feeders, pitching the side slopes of the Main Branch Lower, right bank, and repairs to the Hudiana Drain.

4. The total value of manufactures amounted to Rs. 6,25,006 as against Rs. 3,46,694 in the previous year. The increase was partly due to the higher cost of materials. The percentage charges realized on the value of work done amounted to Rs. 1,69,915 against Rs. 1,26,174 of the previous year. The profit resulting from stock transactions, selling at market rate as against purchases before the war, amounted to Rs. 2,87,975 which was credited to revenue. In addition to works of minor importance, a work of some magnitude was undertaken in the remodelling of the iron work of the Rasul Regulator and undersluices of the Lower Jhelum Canal. The former is being fitted with radial arm gates of a new type designed at the Workshops, while the latter are being fitted with a modified form of Stoney sluice gate. A considerable amount of work was also done for other Departments, more particularly for the Munitions Board and Military Works. For the former a large quantity of transport wagon details, such as tail boards, dust caps, pipe boxes, etc., were manufactured, together with Railway requirements such as dog-spikes, platelayers' spanners, etc.; while for the latter several sets of tube wells were manufactured, a large quantity of tramway plant, engines, armoured cars and motor cars repaired and sets of pankah pulling mechanism supplied. For the Buildings and Roads Branch; several tube wells were made and several engines repaired.

In addition to the above, requisitions for tube wells from the Mayo Hospital, Lahore; Patiala, Kapurthala and Bahawalpur States; from several Railways, including the North-Western Railway, the East Indian Railway, the Eastern Bengal Railway and the Nushki Extension; several Municipalities; and from Baluchistan were met during the year.

Other Provinces also sought help in various ways. The North-West Frontier Province got a number of sets of distributary gates and gearing; Bengal and Bombay asked for preliminary designs and estimates for the Damodar river works and Sukkar Barrage, respectively, which were prepared and supplied; and the Mysore State asked for a design for gates for a high dam which also was worked out and supplied.

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The following table compares the area irrigated during the year with the average of the two previous triennia and with the figures of 1917-18:—

CROP.	AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
Kharif	550,379	588,340	555,771	524,888
Rabi	611,508	625,344	588,760	540,161
Total	1,161,047	1,168,084	1,114,521	1,065,049

The deficiency in irrigation during 1918-19 was due chiefly to the failure of the rains in 1918 resulting in the restriction of *wadh* irrigation and to the river remaining very low throughout the year.

Nature of season and state of demand
and supply—
Kharif 1918.
Rabi, 1918-19.

6. The mean rainfall is compared with the average of the previous 3 years in the following table.—

DISTRICT.	1918-19.		AVERAGE OF PREVIOUS 3 YEARS ENDING 1917-18	
	<i>Kharif.</i>	<i>Rabi.</i>	<i>Kharif.</i>	<i>Rabi.</i>
	Inches.	Inches.	Inches.	Inches.
Gurdaspur	14.75	7.15	29.17	4.97
Amritsar	7.27	5.11	22.68	4.05
Lahore	7.40	3.42	19.32	2.24

The monsoon of 1918 was an extremely weak one. There was light rain during April but no rain during May and only light showers during June and July.

Real monsoon conditions did not set in until the middle of August, and ended as early as the 1st week in September.

During the monsoon months, May to September, the total rainfall at Madhopur was only 20.2 inches against an average for the past 15 years of 40 inches.

There was little or no rain during October and November and only light rainfall in December. In January there was good rain.

The river Ravi was abnormally low during the monsoon. There were only 3 occasions on which the Mukesar gauge registered over 10 feet and the maximum flood reading was 12.4 feet on the 26th August 1918 as against 21 feet during 1917.

7. The net income (direct and indirect) amounted to Rs. 37,84,114 equivalent to 16.89 per cent. on the capital invested compared with 16.52 per cent. of the previous year.

Financial results based on collections—
Rabi, 1917-18.
Kharif 1918

The uncollected balance of occupiers' rate was Rs. 43,256 against Rs 36,969 at the end of the previous year. Remissions of water rate amounted to Rs. 41,237 compared with Rs. 3,04,973 of last year.

The area for which remissions were granted was 20,534 acres compared with 67,237 acres in 1917-18 and was due largely to the damage caused by insects owing to insufficiency of moisture.

8. (a) *Duty*.—The average duty secured on the supply utilized was 96 acres in *kharif* and 205 acres in *rabi* as against 132 acres and 267 acres, respectively, of the previous year.

General remarks.

The canal was closed from 31st January 1919 to 15th February 1919 when all falls were unwatered and repaired where necessary.

In addition there were minor closures for a few hours each which were made during floods in the river to prevent shingle and timber entering the canal.

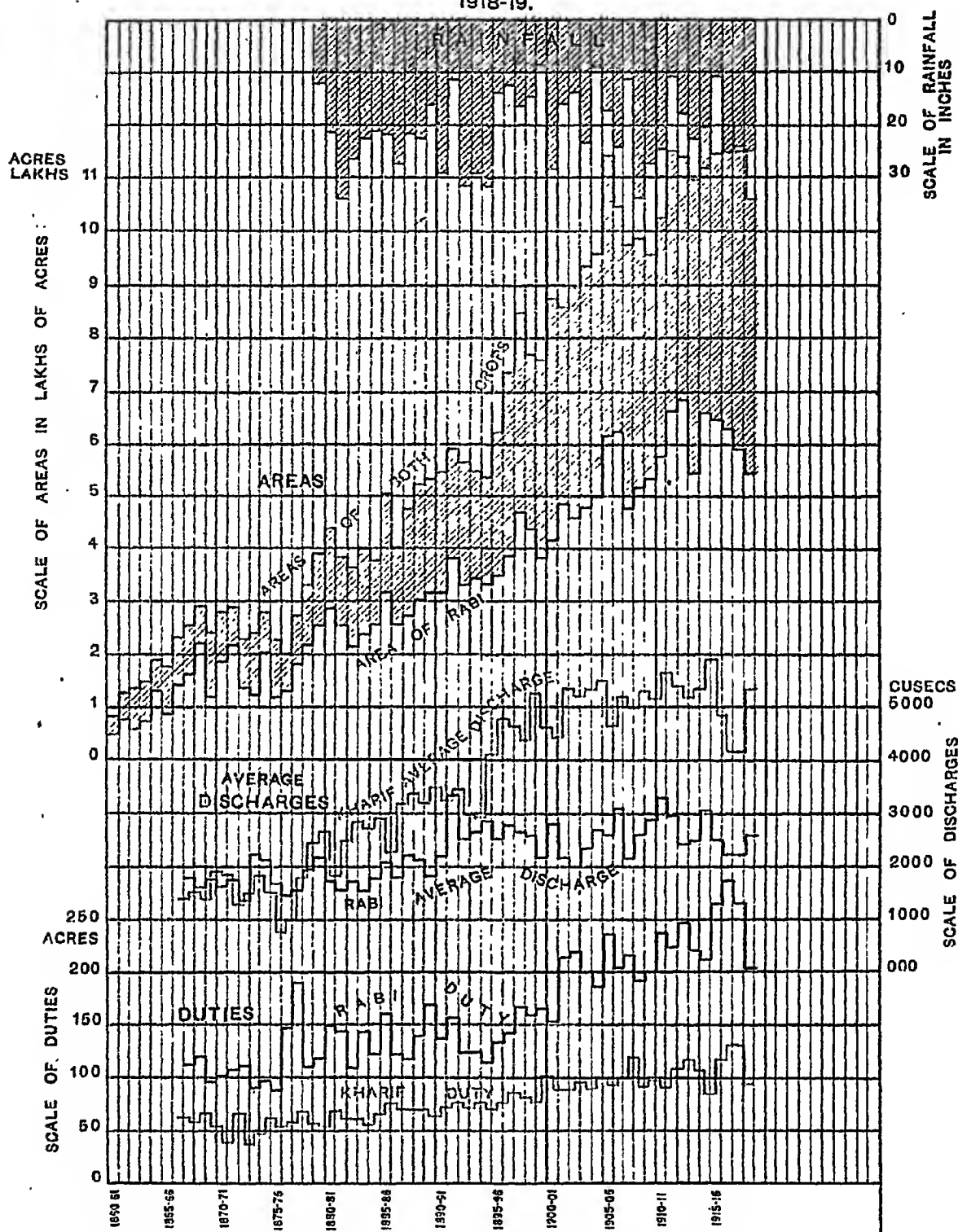
(b) *Principal crops*.—The areas of the principal crops grown during the year are compared in the following table with those grown in the previous year :—

Name of crop.					1917-18.	1918-19.
					Acres.	Acres.
Wheat	...	...	...	...	208,416	226,970
Barley	...	...	...	...	7,181	8,044
Rice	...	...	...	...	70,054	66,204
Maize	...	...	...	...	49,214	68,372
Millet	...	...	...	...	104,914	121,666
Cotton	...	...	...	...	134,189	137,084
Sugarcane	...	...	...	...	48,154	561,679

UPPER BARI DOAB CANAL:

WORKING RECORD.

1918-19.



N. B.—The intercepts in the red area show the Kharif acreage each year.

The discharges are measured at canal head and are averages for each crop.

The duties are derived from these areas and discharges.

Remarks.—The Kharif duty is fairly uniform and increasing slowly.

The Rabi duty is more irregular, due to variation in demand, but is increasing recently.

The Rabi supply decreased fairly steadily from 1891-92 to 1902-03, but nevertheless the areas increased owing to higher duty.

The Kharif supply has increased since 1894 very considerably, owing to the capacity of the canal being enlarged.

Usually the whole of the river winter supply is taken in for the Rabi crop, but after March and up to September the river supply is in excess of requirements.

Area under wheat is about 10 per cent. more than that of previous year.

(c) *Agricultural conditions.*—The year was unfavourable for agriculture. Owing to the failure of the monsoon there was very little *barani* area sown during the *kharif* and owing to early cessation of the monsoon in September and lack of rain during November and December the area sown *barani* and *wadh* irrigation during the *rabi* was also small.

The canal was below indent from 11th September to 25th March 1919

(d) *New works contemplated*—(i) It is probable that deeper tube wells will have to be put down in connection with the Hydro-Electric subsoil pumping scheme in Amritsar as a result of the failure of the monsoon rainfall of 1918. The supply obtained from the existing wells has fallen off to an extent totally unexpected.

(ii) *Radial Arm Gates, Madhopur Inlet.*—An estimate has been prepared for fitting the remaining bays of the Inlet with Radial Arm Gates.

(iii) *Pitching Main Branch Upper.*—Proposals have been under consideration for extensive pitching with boulders of the Main Branch Upper to prevent bank erosion.

LOWER BARI DOAB CANAL.

(SUPERINTENDING ENGINEER—MR. R. CANNELL.)

1. The total expenditure (direct and indirect) amounted to Rs. 1,84,649, bringing the total outlay to date to Rs. 2,26,46,199. The expenditure was incurred principally on the following works :—

Capital account.
Kharif, 1918.
Rabi, 1918-19.

New Divisional staff quarters at Balloki and Khanowal; rest-houses at Ohugatta and Akil (Tulamba distributary); subordinates' quarters in the Montgomery and Khanowal Divisions; Patwarkhanas; Tulamba distributary with its minors; Ohak Shabana distributary; and water-courses (cost recoverable from settlers) on the Kalasan, Ganji Bar, and Tulamba distributaries, for incoming colonists; and culverts on the water-courses of the Chichawatni distributary.

More money could not be spent with advantage as labour was scarce and wages and rates high. Extensions of Government channels and construction of water-courses kept pace with colonization.

On water-courses Rs. 98,230 were spent, bringing the total expenditure to date to Rs. 13,23,692. The recoveries effected from the zamindars amounted to Rs. 1,37,145, but this was the first year of recoveries under the new procedure, and it does not represent the average annual recovery estimated as necessary to extinguish the debt in the course of a certain period.

Contribution works.—The following works were carried out through the agency of the Canal Department :—

- (a) Irrigation channels and other works connected therewith were constructed for Rai Bahadur Ganga Ram, C.I.E., M.V.O., the lessee of the Renala and Khokhar lift Irrigation Schemes, and for Major D. Vanrenen, the lessee of the Renala estate, costing Rs. 1,26,268 and Rs. 9,682 respectively.
- (b) A well was constructed at a cost of Rs. 1,508 for the 32nd Lancers' Horse breeding Farm, Blairpur, near Montgomery.
- (c) Chichawatni Mandi bridges and metalling ramps, costing Rs. 8,403.
- (d) An 8 feet diameter brickwork well was built for the 36th Cavalry in village 26 of the Jahanian distributary.
- (e) A plantation minor was also constructed for the Forest Department from R. D. 8,900 of 3-L Minor, Forest distributary.

The total expenditure, amounting to Rs. 1,03,897, covered the building of drains at the new canal station at Balloki, write back of "capital" expenditure on buildings to "Revenue" in those cases in which new buildings were sanctioned to replace those which were of a temporary nature; instituting new plantations and avenues;

Extensions and improvements.

alterations and extensions of irrigation channels ; constructing boundary road culverts ; and improvement of drainages ; as also the tail outlet clusters of distributaries and other small masonry works for improving the distribution of water.

3. The expenditure of Rs. 4,56,034 was incurred on ordinary maintenance of Headworks, Flood Embankments, Main Line distributaries, buildings and plantations, and special repairs to and remodelling of the Balloki discharge flume, and building artificial berms to hold the rising supplies in the Main Line and in some of the distributaries.

Nature of season and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

4. The canal was in flow for 305 days (166 days during *kharif* and 139 days during *rabi*) against 323 days in the previous year.

The demand for canal water was keen throughout the year, rainfall being scanty, especially during the *kharif* and the first half of the *rabi* seasons.

Owing to shortage of water in the rivers, and to the deficiency of the monsoon rainfall a great deal of water was applied to watering the cotton crop which would otherwise have been utilized for sowings of the following *rabi* crop : but, in spite of this, the latter showed an increase over the previous year. During the first half of the *rabi* season practically no rain fell and the river supplies were low, but timely rainfall in January saved the situation, which would otherwise have been critical.

The supply rose to 5,131 cusecs for a short period against a designed capacity of 6,750 cusecs at canal head.

The actual average rainfall is compared below with that of the previous year :—

	1918-19.	1917-18.
	Inches.	Inches.
Lahore District ...	8.66	38.86
Montgomery District ...	4.48	30.06
Multan District ...	4.64	18.76

5. The following table compares the areas irrigated each year since the commencement of irrigation on this canal, with the area forecast for each year in the Project Estimate :—

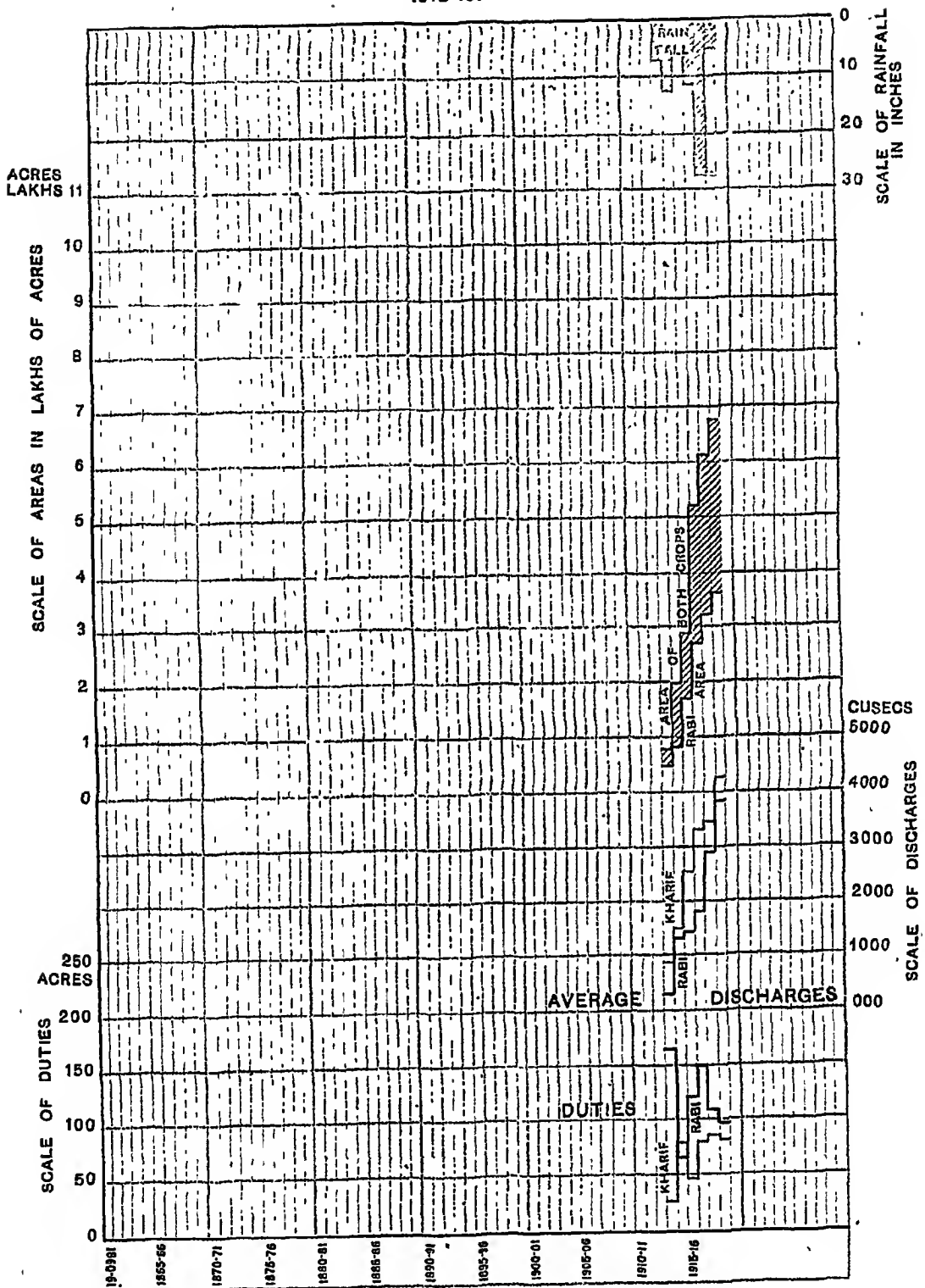
Area irrigated—
Kharif, 1918.
Rabi, 1918-19

YEAR.	ACTUAL.			As estimated in the Project Estimate (annual).
	<i>Kharif</i> .	<i>Rabi</i> .	Total.	
	Acres.	Acres.	Acres.	Acres.
1913-14 ...	19,996	53,582	73,578	...
1914-15 ...	106,302	82,902	189,204	250,000
1915-16 ...	114,974	168,320	283,294	450,000
1916-17 ...	248,443	266,493	514,936	650,000
1917-18 ...	296,526	325,074	621,600	871,308
1918-19 ...	325,593	352,411	678,004	871,308

LOWER BARI DOAB CANAL.

WORKING RECORD

1918-19.

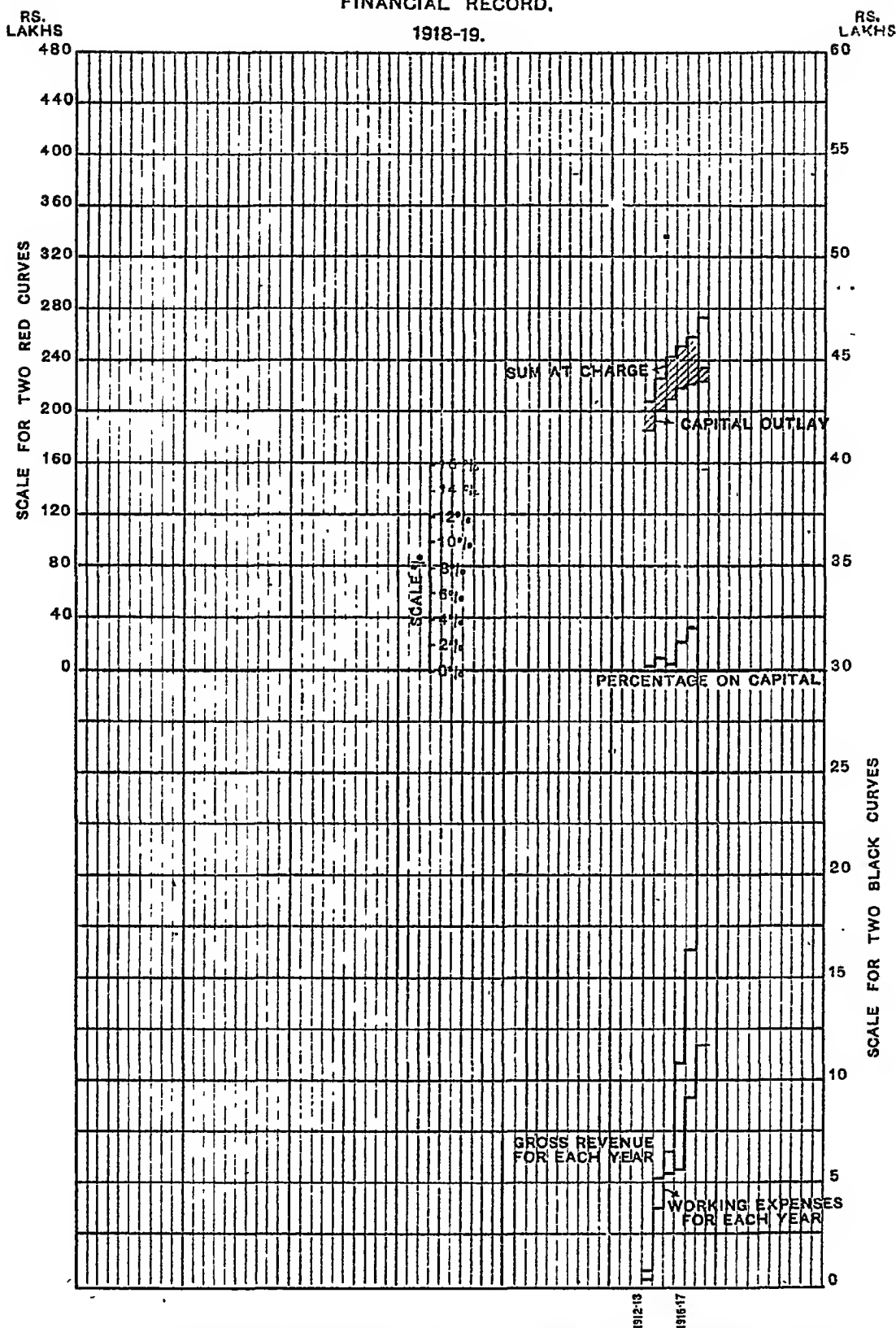


N.B.—The intercepts in the red area show the Kharif acreage each year.
The discharges are measured at canal head and are averages for each crop.
The duties are derived from these areas and discharges.

LOWER BARI DOAB CANAL.

FINANCIAL RECORD.

1918-19.



N. B.—The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts between the black curves give the net income each year. Construction commenced in 1907 and the canal was opened in 1913.

This canal being one of the triple project canals its financial record, considered alone, is largely fictitious. The financial record of the triple canal project as a whole is shown on a separate diagram facing page 26.

Detail of irrigation in 1918-19, for old and new villages separately in each Division, is given below :—

Division.		Old.	New.	Total 1918-19.
		Acres.	Acres.	Acres.
Balloki	...	42,095	64,938	107,028
Okara	...	21,707	208,773	230,480
Montgomery	...	11,841	197,213	209,054
Khanewal	...	13,798	117,644	131,442
Total	...	89,441	588,563	678,004

The progress of canal irrigation, as remarked in the report for 1917-18, is a year behind that of the Project Estimate, owing chiefly to the Upper Jhelum Canal having been opened a year later than had been anticipated, and also to the backwardness of colonization. A very hopeful feature is the popularity of the *kharif* crop resulting from the high prices ruling for cotton. The canal, as remarked by the Cotton Commission, promises to be a first class *kharif* canal and this feature is likely to reduce the demand for the scanty water supply available in the winter months. The development of irrigation has been retarded by the fact that in consequence of the recommendations of a Conference of Civil and Canal Officers at Lahore in 1911 the distributaries of this canal were constructed to an aggregate capacity only four-fifths of that to which they should have been designed, so that they could not dispose of the full supply which the canal itself had been designed to carry. This mistake is now being rectified by enlargements of the capacities of the distributaries.

6. The gross receipts amounted to Rs. 46,93,839, the working expenses to Rs. 11,71,904, and the net revenue to Rs. 35,21,935. The receipts were about 28 lakhs more than those of the previous year, the increase being due to—

Financial results based on collection.
Rabi, 1917-18.
Kharif, 1918.

- the increase of about 2 lakhs acres in the area assessed during *rabi*, 1917-18 and *kharif*, 1918, revenue for which was realized during the year under report ;
- the increase of about Rs. 97,000 under miscellaneous receipts from water power, etc. ;
- the increase of about Rs. 22,61,300 realized from sales of waste lands on which the canal received a credit at 4 per cent. per annum of Rs.90,462 more than last year ;
- the credit of Rs. 17,10,221, on account of the land revenue and malikana in the Montgomery District for this year and the six years previous to it, which has only been given during the year under review.

In the previous year the net revenue gave a return of 5.3 per cent. on the capital invested but this year the return has gone up to 16.3 per cent.

7. (a) *Duty*.—The duties on areas irrigated per cusec of average supply measured at canal head and at distributary heads, respectively, compare as follows with those of the previous year :—

YEAR.	KHARIF DUTY		RABI DUTY	
	At canal head less escapeage.	At distributary head (average).	At canal head less escapeage.	At distributary head (average).
1917-18 ...	87	107	105	136
1918-19 ...	71	87	94	115

The low duties were due to the temporary nature of allotments over about 50 per cent. of the area so far distributed. Temporary cultivators do not use water economically. The supply has not been restricted as it is considered sound to supply water abundantly to colonists who, in addition to the many other difficulties attendant on the opening of a new colony, are faced with the task of reclaiming inferior soils which require to be worked up to a good tilth before they can grow crops successfully.

(b) *Remissions*.—The area remitted amounted to 131,817 acres (66,109 acres in *kharif* and 65,708 acres in *rabi*) mainly due to—

- (i) free crop under tenancy rules and not for crop failure, and
- (ii) failures of crops.

The remissions under (i) above amounted to 58,249 acres (19,814 acres in *kharif* and 38,435 acres in *rabi*) and require no explanation.

As to (ii) above the chief causes of remissions were short supply in certain "chaks," bad germination or cultivation, bad soil and late sowing, etc. The principal crops affected were rice, cotton, sugarcane, maize, jowar and chari in the *kharif* season and wheat, barley, gram, toria and senji in the *rabi* season.

(c) *Progress of colonization*.—The following table gives the total culturable crown waste (allotable) area on the canal and the area allotted permanently and temporarily at the beginning and end of the year :—

Total culturable Crown waste area allotable as per Mr. Joseph's classification.	Area allotted to end of 31st March 1918, permanent and temporary.	AREA ALLOTTED TO END OF 1918-19.		
		Permanent,	Temporary.	Total.
Acres.	Acres.	Acres.	Acres.	Acres.
1,016,972	817,662	480,790	453,273	934,063

Great assistance to the working of channels was afforded by the large increase in temporary allotments, permanent allotments being not adequate.

In view of the enormous increase in the profits and value of land since 1914 a differential scale of "Malikana" has been sanctioned for temporary cultivation varying from Rs. 2 to Rs. 16 per matured acre, at the discretion of the Colonization Officer, according to the quality of the land.

The market value of the land is rising, the highest price paid in March 1919 at an auction being Rs. 1,018 per acre.

(d) The increase in area under American cotton was substantial, and with the improved supplies of the current *kharif* a still more marked increase may be confidently anticipated. During *kharif* 1919 areas of 235,000 acres of American and 24,500 acres of "desi" cotton have been booked, and the former exceeds by 57 per cent. the future average annual area of 150,000 acres estimated at page 22 of the Report of the Indian Cotton Committee.

(e) The working of the canal, generally, proved satisfactory and the Colony staff gave every possible assistance by allotting unoccupied areas. As the Main Line of the canal will soon be running with its full capacity, every acre of culturable land, good, bad and indifferent, requires to be occupied. The barren aspect of inferior soils yields to good cultivation and to an abundant supply of the fertilizing flood water of the river Ravi. The principal working feature of the year was the running of increased supplies in the Main Line and the forcing up of supplies in all distributaries with a view to their being able to carry the supply represented by the full capacity of the canal. There have, on the whole, been very few complaints of unsatisfactory water supply, but a few villages at the tails of channels were poorly supplied, in comparison with villages lying nearer the sources of supply, these shortages being due to defects in "command" and to breaches of banks where berms had not formed.

UPPER CHENAB CANAL.

(SUPERINTENDING ENGINEER—MR. A. R. MURRAY.)

1. The expenditure (direct and indirect) amounted to Rs. 1,33,866, but the recovery of Rs. 58,499 effected from the cultivators on account of the cost of water-courses, and a credit of Rs. 77,214 under Suspense (Rs. 62,416 for stock issues to works and Rs. 14,79 for stock sales), as well as receipts of Rs. 4,192, on Capital Account, reduced it to a credit balance of Rs. 6,039. This brought the total outlay to the end of the year to Rs. 3,57,69,507 as against Rs. 3,57,75,606 to end of 1917-18. No large works were carried out. Expenditure was incurred mainly on construction of quarters for establishment, distributary channels of the Nokhar Branch, and minor masonry works, of which two foot bridges on the Main Line Lower were the most important.

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

2. The expenditure amounted to Rs. 30,660 against Rs. 11,325 in the preceding year. No works calling for special mention were carried out.

Extensions and Improvements.

3. The expenditure amounted to Rs. 6,23,964 against Rs. 5,43,107 in the previous year. Repairs to the floor, downstream of the undersluices at Merala, were effected at a cost of Rs. 40,000, and a considerable quantity of work was done in improving the condition of canal and distributary banks. The soil of which the banks are composed is a stiff sour clay impregnated with salts, and the margin of width provided for natural berm formation in the canal is generally insufficient. Steps were taken to induce berm formation where such had not already taken place, and efforts were made to staunch banks by means of silt from berms already formed. A good deal of work was also done in the way of consolidating and grading banks.

Maintenance and Repairs.

Nature of seasons and state of demand and supply—

Kharif, 1918.
Rabi, 1918-19.

4. The *kharif* season was not a favourable one owing to deficient rainfall, more especially at the time when rice was sown.

In the *rabi* season timely rainfall, during the maturing period, benefited both irrigated and unirrigated crops substantially.

At Gujranwala 8.83 inches of rainfall were recorded during *kharif*, and 3.92 inches during *rabi*, as compared with averages of 22.93 inches and 3.97 inches for the last three years.

Demand for canal water was generally keen throughout the year. The canal was in flow for 109 days during *kharif* and 138 days during *rabi*. Rotational working of the linked canals was enforced from the 1st October.

Area irrigated—

Kharif, 1918.
Rabi, 1918-19.

5. The following table compares the areas irrigated during the year with preceding years and with the project forecast :—

YEAR.	ACTUAL.			Project forecast.
	Kharif.	Rabi.	Total.	
	Acres.	Acres.	Acres.	Acres.
1914-15	121,189	90,693	211,882	350,000
1915-16	159,152	165,910	325,062	500,000
1916-17	285,917	151,500	437,417	648,367
1917-18	245,110	187,825	332,935	648,367
1918-19	204,094	222,170	426,264	648,367

Of the total area irrigated 399,005 acres were in the old proprietary villages and 27,859 acres in Colony villages.

The *rabi* figures showed an appreciable improvement over those of previous years, but the *kharif* figures were disappointing. The poor results during *kharif* were attributable partly to deficient rainfall and partly to the fact that the *kharif* Full Supply Factor, on which the capacities of the distributary channels have been based, had been wrongly calculated in the Project Report for the class of crop grown.

Delay in the construction of watercourse systems, pending final settlement of the complicated question of canal irrigation of well areas in certain zones, also militated against development of irrigation.

6. The gross revenue (direct and indirect) amounted to Rs. 19,87,335, the working expenses to Rs. 12,80,996, and the not revenue to Rs. 7,06,339, or 1.97 per cent. on the capital outlay.

Financial results based on collections —
Rabi, 1917-18.
Kharif, 1918.

As remarked in last year's administration report the Upper Chenab Canal is, in great measure, a feeder channel for the Lower Bari-Doab Canal, so that, as a commercial proposition, it cannot be altogether judged by its own financial results.

7. During the course of the year the Meralia Timber Depot was brought to completion and collection of timber was started on a small scale. The Canal Railway line between Meralia and Sambrial has not, however yet been taken over by the North-Western Railway.

General remarks.

The Aik Nallah was surveyed with a view to preparation of a report on flood restriction and utilization of the waters of the Aik.

The year was a comparatively dry one and consequently no increase in oversaturation of the lands adjoining the main canal was noticeable. The important question of drainage of these lands engaged attention, and a scheme for clearing the channels of the Palkhu Nallah system and constructing seepage drains along the main canal was prepared.

During the autumn the influenza epidemic almost paralyzed operations. As an instance of its severity it may be mentioned that, for a time, during November, practically the whole of the regulating establishment at the Headworks was placed *hors de combat*, and the Military authorities at Sialkot had to be asked for assistance, which they kindly rendered in the shape of a detachment of Sappers and Miners.

There was marked scarcity of labour during the winter season, for which the influenza epidemic was probably largely to blame, and labour rates showed a marked upward tendency.

LOWER CHENAB CANAL.

(SUPERINTENDING ENGINEER—MR. J. W. B. LOUGHRAN.)

1. The expenditure (direct and indirect) amounted to Rs. 7,581, but as the canal received a credit of Rs. 29,936 on account of stock transactions under the Suspense account the net expenditure showed a credit balance of Rs. 22,355. This reduced the total outlay from Rs. 3,25,18,571 at end of 1917-18 to Rs. 3,24,96,216 to end of the year under review. The small expenditure was incurred mainly on constructing Patwarkhanas and fixing Kennedy Gauge Outlets, and the credit balance resulted from reduction of stock and tools and plant, the former by issue to maintenance and repairs and Taccavi works, and the latter mainly by sale to the Army Department and Munitions Board for Mesopotamia and elsewhere.

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

2. The expenditure amounted to Rs. 1,80,337 and was spent on a large number of small works. The bulk of it, however, was incurred on improving the drains in

Extensions and Improvements.

UPPER CHENAB CANAL.

FINANCIAL RECORD.

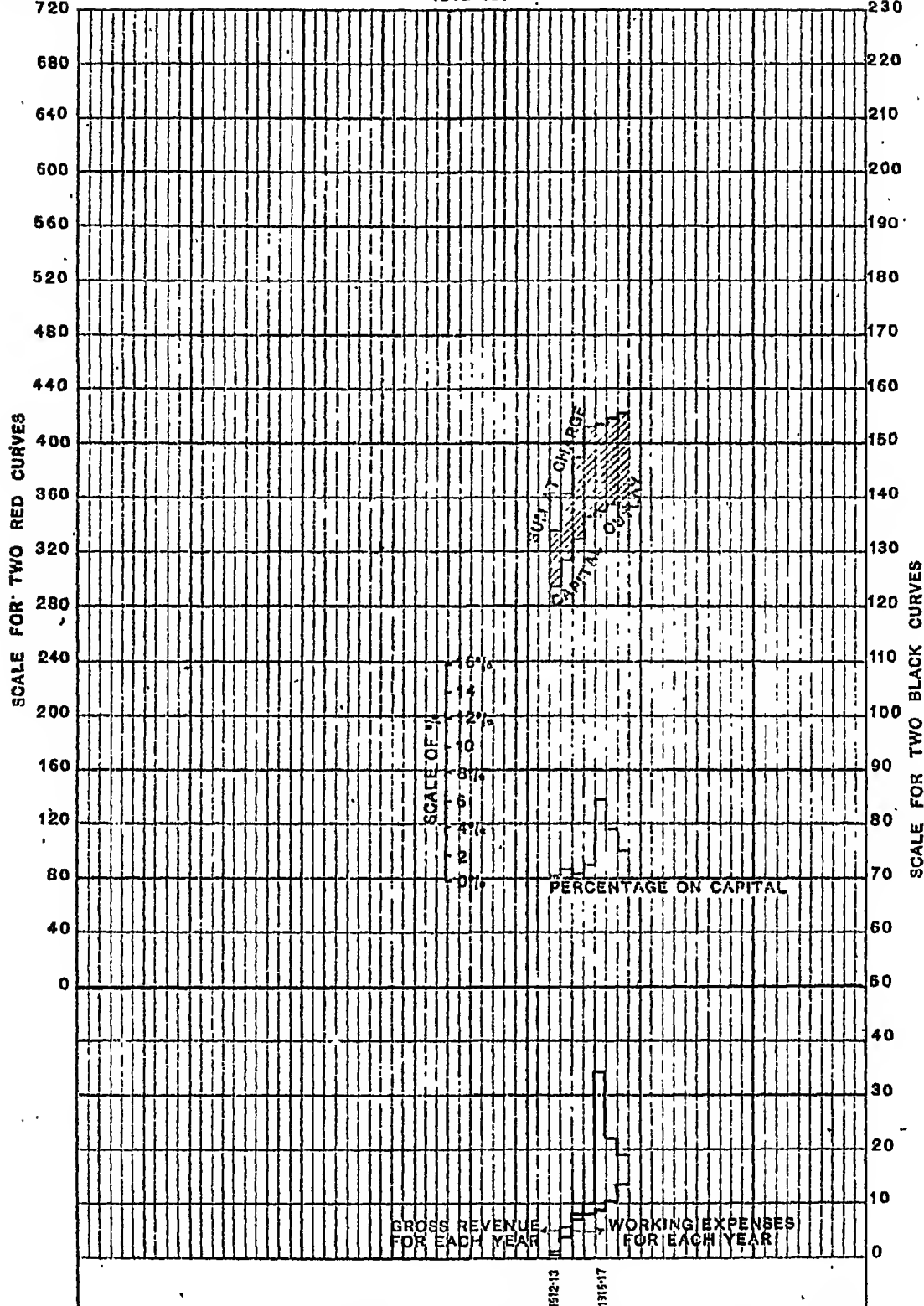
1918-19.

RS.
LAKHS
720

RS.
LAKHS
230

SCALE FOR TWO RED CURVES

SCALE FOR TWO BLACK CURVES



N. B.—The intercepts in the red area show arrears of interest which, added to the capital, give the sum at charge.

The intercepts between the black curves give the net income each year.

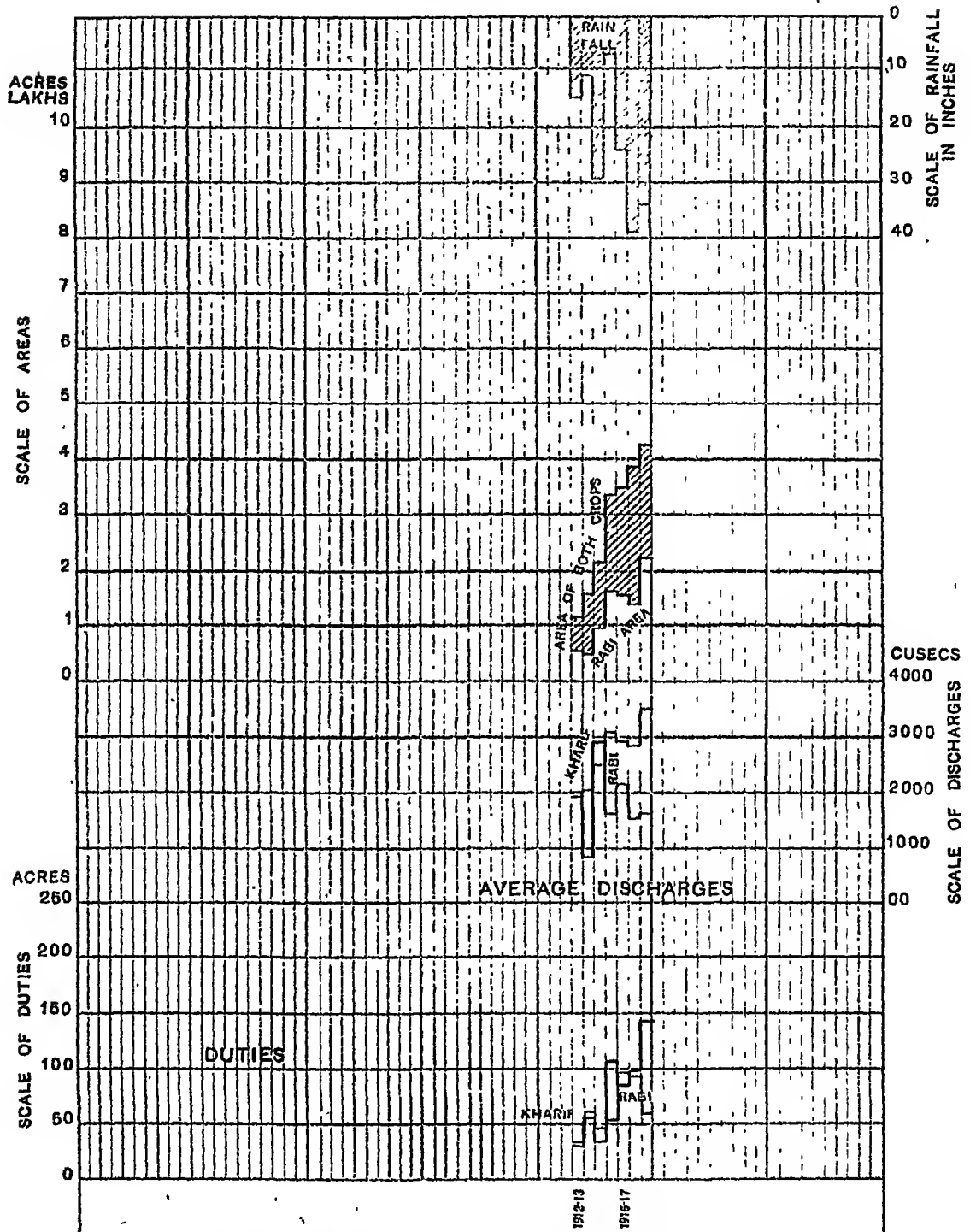
Construction commenced in 1905 and the canal was opened in 1912.

This canal being one of the triple project canals its financial record, considered alone, is largely fictitious. The financial record of the triple canal project as a whole is shown on a separate diagram facing page 26.

UPPER CHENAB CANAL.

WORKING RECORD.

1918-19.



N. B.—The intercepts in red area give the Kharif irrigation each year. The discharge are measured at Merala the head of canal and give averages for each crop. The duties are derived from these areas and discharges.

the Hafizabad tract, and in improving the distribution of water from the irrigating channels of the canal. Round about Hafizabad the country, during the year under report, was drier than usual, the area water-logged being small. This was partly due to the poor monsoon and partly to the influence of the surface drains that have been constructed by this Department. Rainfall appears to play an important part in the water-logging of this tract.

3. Expenditure amounted to Rs. 8,67,233, a normal figure, and was incurred on the annual maintenance of channels, masonry works, buildings and on repairing Bays Nos. 4, 5 and 6 of weir at Khanki, and shanks of Spurs G, H and E, renewal of Railway track at Sangla; and strengthening and widening banks of branches and distributaries.

4. (a) The *kharif* season was a dry one. The demand for canal water was, in consequence, very keen and the defects in the distributing systems were brought into prominence. On channels provided with Kennedy Gauge Outlets there were few complaints and defects were easily adjusted, but on channels not so provided the distribution was inequitable and on some channels *tatils* of outlets had to be enforced. The *rabi* rainfall was poor but very beneficial to the standing crops. The river supplies during the *rabi* season were, on the whole, satisfactory, though not abundant.

The canal ran for 171 days in *kharif* and 175 days in *rabi* and was closed at the head for 12 days in *kharif* and 7 days in *rabi*.

There were very few floods in the river Chenab at Khanki during the year, and they were of moderate volume. The largest flood occurred on 5th and 6th April 1918 and amounted to 169,000 cusecs.

(b) *Rainfall*.—The following table compares the rainfall of the year under review, with that of the previous three years:—

Crop.	Lyallpur District.	Jhang District.	Gujranwala District.	REMARKS.
	Inches.	Inches.	Inches.	
<i>Kharif</i> , 1918 ...	4.62	5.91	8.01	
<i>Rabi</i> , 1918-19 ...	2.05	2.68	3.07	
Total for year ...	6.67	7.90	11.08	
1917-18 ...	24.10	25.13	29.57	
1916-17 ...	12.44	9.62	21.61	
1915-16 ...	2.28	2.92	5.15	

5. The following table compares the irrigation with the averages of the two previous triennia and with the figures of 1917-18:—

CROP.	AVERAGE OF THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
<i>Kharif</i> ...	724,862	608,231	727,281	795,545
<i>Rabi</i> ...	1,541,143	1,584,413	1,540,844	1,543,053
Total ...	2,266,005	2,282,644	2,277,125	2,338,598

Of the area irrigated 419,186 acres were in old villages and 1,920,012 in Colony villages.

The figures for the year, as well as for the *kharif* crop, were the largest ever recorded. The slight decreases in the *rabi* figures as compared with the figures of 1917-18 and the preceding triennium was attributable to the following causes :—

- (a) Deficiency of rainfall during sowing time.
- (b) The rotational closures being commenced during the critical period of wheat sowing.
- (c) The Influenza epidemic, which was severe, and which prevented Zemindars from preparing their fields and sowing to the same extent as usual.

The *kharif* duty worked out to '84 acres and the *rabi* duty to 211 acres as compared with 95 acres and 197 acres in the previous year.

Remissions.—In the *kharif* season 6,353 acres were remitted and in the *rabi* 3,987 acres, or a total for the year of 10,340 acres against 11,910 acres in 1917-18. These remissions included 396 for *kharif* and 14 acres for *rabi* under Tenancy rules. Owing to the dryness of the *kharif* season insects were more active than usual and the bulk of the remissions for that crop was due to them. In the *rabi* season bad germination accounted for 1,407 acres.

6. The net revenue amounted to Rs. 1,42,49,271, giving a return of 43.85 per cent. on the capital outlay of Rs. 3,24,96,216 to the end of the year.

Financial results based on collections—
Kharif, 1918.
Rabi, 1917-18.

Similar details for the previous year are :—

	Rs.
Capital outlay	3,25,18,571
Net Revenue	1,28,02,664
Percentage on Capital	39.37 per cent.

This favourable result was mainly due to—

- (a) the record area irrigated during *kharif* 1918 ;
- (b) a deduction of Rs. 8,34,000 made in 1917-18 for cost of Civil Administration in the Lyallpur District which the Civil Department omitted to make during the two years previous to it and which, in consequence, affected the figures of 1917-18, whereas no such deduction was made during the year under report ;
- (c) a greater area of higher rated crops having been matured during the *rabi* crop of 1917-18 and *kharif* 1918.

The accumulated net profits after defraying interest charges have increased from Rs. 13,88,42,183 to Rs. 15,19,86,744 against a capital of Rs. 3,24,96,216 invested at end of the year.

7. The operations of the year were limited by the need for severe economy on account of the War. Only those works were carried out that could not be delayed.

General remarks,

The cost of materials was high and labour scarce and expensive.

Alternative estimates were prepared for raising the weir at Khanki to various levels. The object of this is to ensure better control and command of the river at Khanki for regulation and other purposes. At certain stages of the river supply command of the river is almost entirely lost and this leads to heavy shoaling in undesirable places in the river bed and silt troubles in the canal.

An estimate was also prepared for replacing the out-of-date gates and gearing of the undersluices by modern appliances, to reduce the time and labour now spent on working them. This is an important and urgent work now as the present system of regulation requires the undersluices to be used more frequently than in the past.

The next urgent necessity is the alteration of the regulator cills. At present the river cill does not reach the level to which it should rise to meet present regulation needs and, in consequence, when the river levels are high some of the gates of the regulator have to be closed down entirely. This causes swirls in the canal and the concentration of the canal supply through a part of the regulator must cause silt to enter the canal. The needs of different seasons are conflicting. The *kharif* requires a high cill while the *rabi* requires a low one.

UPPER JHELUM CANAL.

(SUPERINTENDING ENGINEER—MR. N. WHITE.)

1. The expenditure (direct and indirect) was more than balanced by realizations on account of sale of Tools and Plant rendered available by the completion of all important works. The capital account, therefore, showed a credit balance of Rs. 37,810 which reduced the total outlay to the end of the year to Rs. 4,49,93,973. The principal works carried out were:—Constructing beldars quarters at Mangla, and inspection house, bridges, minor channels, water-courses and culverts on the Gujrat Branch; seepage drains along the Main Canal to reduce water-logging; and excavating a cut below the Shadiwal weir to improve the outfall of the Bhimber torrent.

2. The expenditure amounted to Rs. 30,667 and was incurred mainly on constructing drains to protect the Canal cut at Mangla and fixing sluice valves in the Main Canal syphons to scour the syphon barrels after floods.

3. The expenditure of Rs. 2,78,322 was incurred mainly on ordinary maintenance and repairs; no heavy damage occurred and the expenditure was, therefore, only about two-thirds of the previous year.

Nature of seasons and state of demand and supply—
Kharif, 1918,
Rabi, 1918-19.

4. The following table compares the rainfall registered during the year with the average of past years:—

STATION.	RAINFALL.			Average of past years.	REMARKS.
	<i>Kharif</i> , 1918.	<i>Rabi</i> , 1918-19.	Total.		
	Inches.	Inches.	Inches.	Inches.	
Mangla ...	19.0	5.8	25.4	31.8	For 8 years.
Chillianwala ...	14.1	3.2	17.4	19.6	For 2 years.
Wasu ...	11.7	4.0	15.7	18.0	Ditto.
Busal ...	10.0	4.5	14.5	14.1	Ditto.
Blachar ...	6.8	5.3	12.1	20.5	Ditto.
Pauranwala ...	12.3	4.4	16.7	18.0	Ditto.
Karariwala ...	13.0	5.1	19.0	15.6	Ditto.

In the irrigated tract the rainfall was poor especially in the *kharif* season and in the early part of the *rabi* season.

The demand throughout the *kharif* was fairly steady and the supply was sufficient except at the beginning of the *rabi* season when the Jhelum river was unusually low.

Area irrigated—
Kharif, 1918
Rabi, 1918-19.

5. The areas irrigated and assessed compare as follows:—

DIVISION.	1917-18.			1918-19.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
	<i>Area irrigated.</i>					
Gujrat ...	15,920	18,184	34,104	16,281	31,932	48,213
Phalia ...	51,288	91,614	142,902	78,581	119,815	198,396
Total ...	67,208	109,798	177,006	94,862	151,747	246,609
	<i>Area assessed.</i>					
Gujrat ...	15,573	17,851	33,424	15,502	31,494	46,996
Phalia ...	50,317	89,314	139,631	75,810	119,205	195,075
Total ...	65,890	107,165	173,055	91,312	150,759	242,071

The results show a 40 per cent. increase on the previous year's figures, but still considerably less than was anticipated in the Project, viz., 3,45,000 acres. This was due to an unavoidable delay of a year in opening the Canal, the epidemic of influenza that impeded cultivation and the development of new irrigation, and recruiting activities that made a heavy call on the available labour.

The Colony villages are now almost completely brought into cultivation and irrigating to the full extent proposed.

6. The gross income from all sources amounted to Rs. 8,00,505 and the working expenses to Rs. 7,37,645 resulting in a profit of Rs. 62,860 or 0.14 per cent. on the capital invested. Last year there was a slight loss but the cost of and expenditure on this Canal is largely in the interests of the other two Canals (Lower Bari Doab Canal and Upper Chenab Canal).

7. The gradual raising of the supply in the Main Line, an operation that necessitates great care and incessant supervision, on account of the numerous high embankments, was carried on successfully during the year, and all ordinary demands for water supply can now be safely met.

General remarks.

There were no large floods in any of the numerous cross drainage works.

The Mangla Division was amalgamated with the Jhelum Division during the year.

LOWER JHELM CANAL.

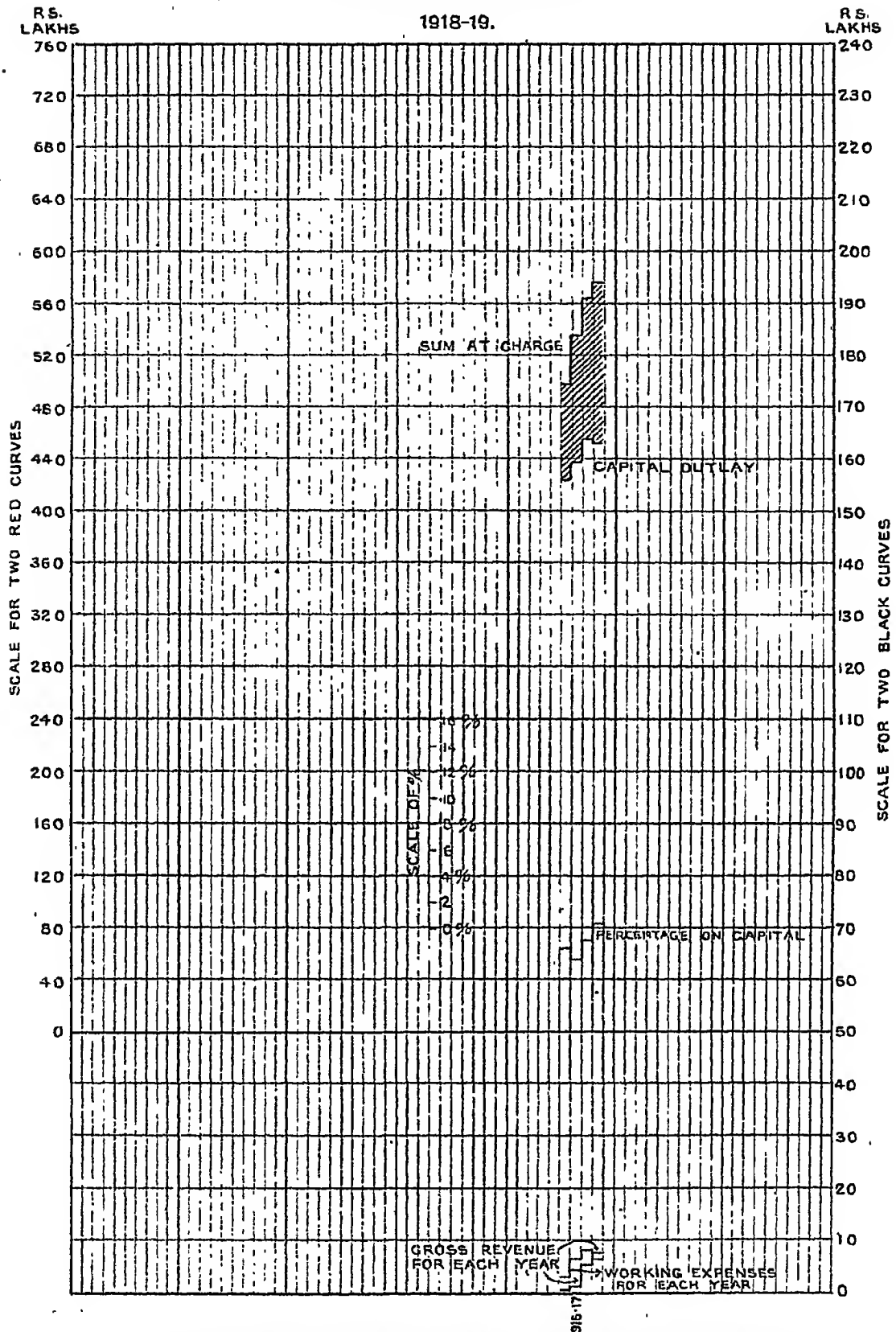
(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER, C.I.E.)

1. The expenditure (direct and indirect) amounted to Rs. 4,53,505, but the recovery of Rs. 1,055 from the cultivators on account of acreage rate reduced it to Rs. 4,52,450. This brought the total outlay to the end of the year to Rs. 1,66,77,579. The expenditure was incurred chiefly on remodelling the Head Regulator, sluices, and Bay No. 1 of the Weir at Rasul; remodelling Main Line, Rattokala distributary, and certain distributaries of the Northern Branch; constructing quarters for Clerks and Subordinates at Rasul, for two sub-divisional officers at Shahjiwana and Uppi; and telegraph offices and signallers' quarters at Rasul and Baha-ud-Din.

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

UPPER JHELMUM CANAL

FINANCIAL RECORD



N. B.—The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts between the black curves give the net income each year.

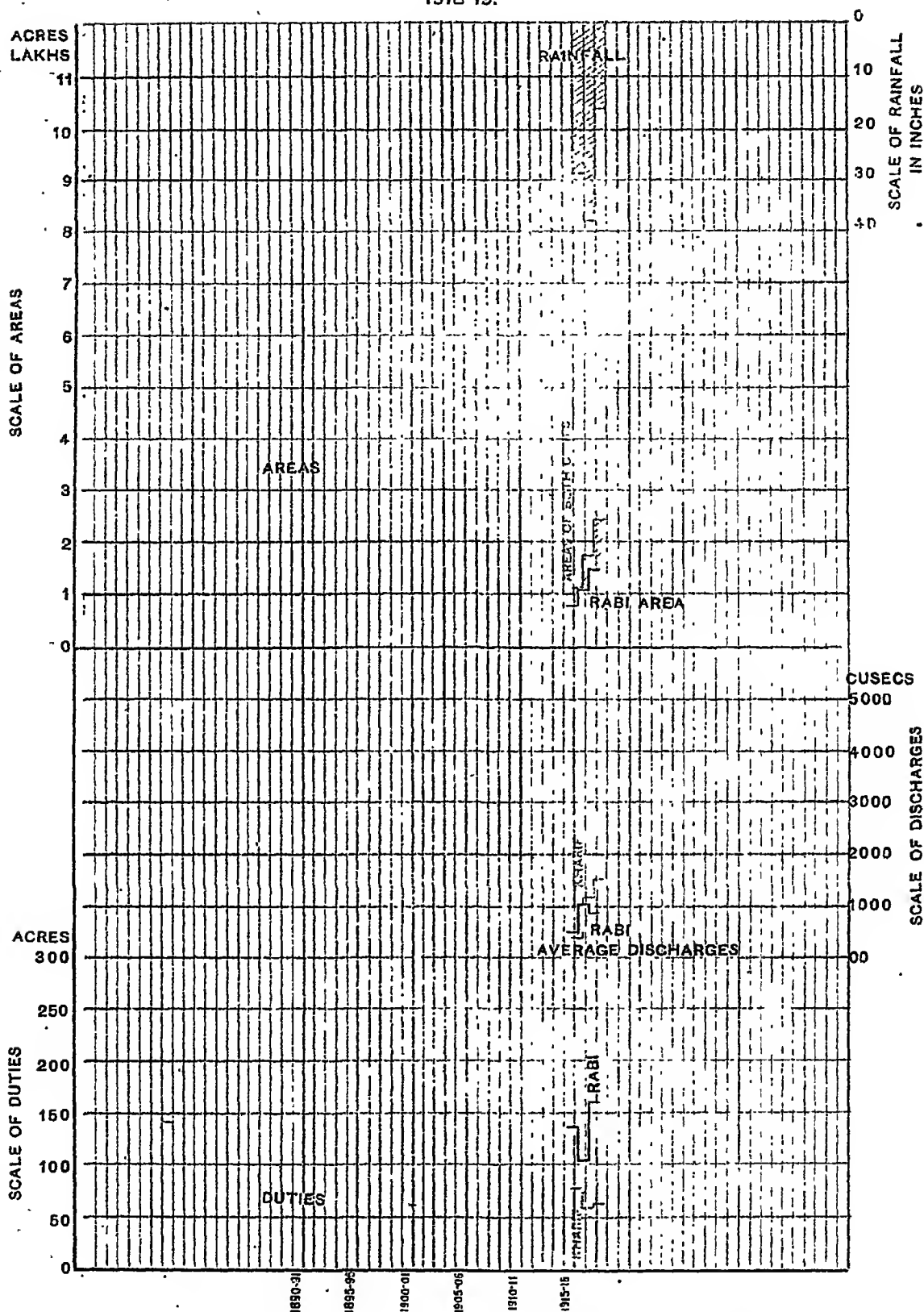
Construction commenced in 1905 and the canal was opened in 1915.

This canal being one of the triple project canals its financial record, considered alone, is largely fictitious. The financial record of the triple canal project as a whole is shown on a separate diagram facing page 26.

UPPER JHELM CANAL

WORKING RECORD

1918-19.



N. B.—The intercepts in the red area show the kharif acreage each year.

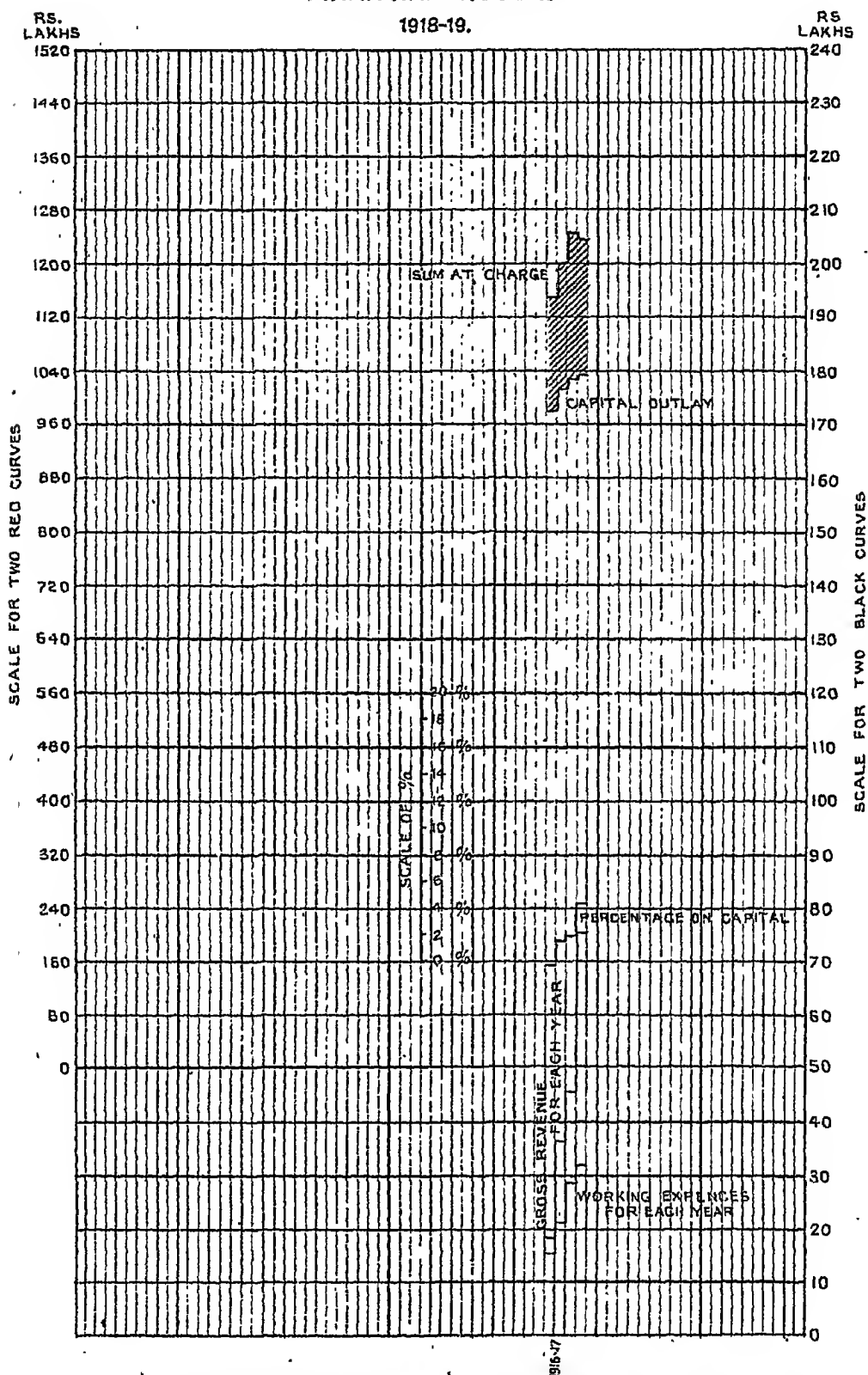
The discharges are measured at canal head and are averages for each crop.

The duties are derived from these areas and discharges.

TRIPLE CANAL PROJECT

UPPER JHELUM, UPPER CHENAB AND LOWER BARI DOAB CANALS COMBINED

FINANCIAL RECORD



N. B.—The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts between the black curves give the net income each year.

Name of Canal.	Construction commenced in.	Canal was opened in.
Upper Jhelum Canal	1905	1916
Upper Chenab Canal	1906	1912
Lower Bari Doab Canal	1907	1913

2. Expenditure amounting to Rs. 53,873 was incurred chiefly on raising the masonry cills and lengthening the upstream impervious floor of Fakirian Regulator; constructing a watchman's hut at R.D. 650, Main Line; pitching the right bank of Rasul watercourse; making bunds and dismantling shutters of the Rasul weir; communication road between Dhaulka and Hissam rest-house; and a motor road to connect Assianwala and Chaukera rest-houses; remodelling head regulator, Malkowala Minor and drainages on Southern Branch; extending avenues on channels in Hujjan Sub-Division; a reinforced concrete bridge over now Beriwalla distributary; fixing Kennedy Gauge Outlets on Mithalak distributary; extending the combined vernacular office at Sargodha; and additions and alterations to the canal dispensary at Rasul.

3. Expenditure to the extent of Rs. 2,64,614 was incurred on the annual maintenance of channels, masonry works, buildings, and on special repairs to undersluices floor; shutters in Rasul Weir Bays Nos. 2 to 7; downstream groynes of Rasul Weir; downstream berms Weir Bays Nos. 4 and 5; downstream talus of Weir Bay No. 1; weir groynes upstream and downstream; downstream floor of Northern Branch Head Regulator and providing sleepers and wooden keys for Rasul Baha-ud-Din Railway.

Nature of season and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

4. A very poor monsoon was the chief feature of the season 1918 as the following statement will show:—

District.	Crop.	Years.			
		1915-16.	1916-17.	1917-18.	1918-19.
Shahpur ...	Kharif ...	Inches. 3.06	Inches. 14.36	Inches. 22.16	Inches. 5.88
	Rabi ...	0.36	1.78	8.42	2.80
	Total ...	4.32	16.14	25.58	7.68
Jhang ...	Kharif ...	1.98	0.77	17.77	5.16
	Rabi ...	0.36	0.85	2.22	2.47
	Total ...	2.34	10.62	19.99	7.63

The *kharif* season opened unfavourably and continued so throughout. A fairly large area was sown, but with only moderate success owing to the scarcity of rain and to the exceptionally hot dry weather. Fortunately there were no hail-storms or other calamities, and the crop yield was up to the average. The winter rainfall did not benefit the wheat crop appreciably.

The total area remitted was 10,517 acres (including 2,106 acres remitted under Tenancy rules), 8,948 acres of which were remitted during *kharif* 1918.

The canal was closed at its head for 14 days during *kharif* and for 3 days during *rabi* for special repairs to works.

The demand for water was keen and the supply was generally sufficient throughout the year except in October 1918. The first rotational closure in October 1918 became necessary earlier than was anticipated and, unfortunately, a severe epidemic of influenza broke out soon afterwards, a combination of circumstances which considerably reduced the *rabi* sowings and in particular wheat sowings.

5. The areas irrigated and assessed during the year compare as follows with the corresponding figures of the averages of the two preceding triennia and of the year 1917-18 :—

CROP.	AVERAGE OF THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
Kharif ...	242,649	290,576	281,872	251,601
Rabi ...	573,812	571,894	533,598	525,895
Total ...	816,460	861,469	765,470	777,496

The increase in area irrigated in *kharif* was due to increased cotton and fodder sowings caused by higher prices. The decrease during *rabi* was mostly due to the shortage of water in October, and to the prevalence of a very severe influenza epidemic during the months of October and November, of which thousands of people died and others were unable to work for weeks. Thus the sowing of *rabi* crops suffered. It was partly due also to the untimely rotational closures of the branches. The supply in the river Jhelum began to fall early in September, and it fell so rapidly that the rotational closures had to begin much earlier in October than had been anticipated.

Out of the total area of 777,496 acres irrigated during the year 385,609 acres were in the proprietary villages and 391,887 acres in Colony villages.

6. The gross receipts (direct and indirect) amounted to Rs. 42,77,101, the working expenses to Rs. 8,60,215, and the net revenue to Rs. 34,16,886, giving a return of 20.49 per cent. on the capital outlay to the end of the year. This return was about 1 per cent. less than that of the preceding year due to —

Financial results based on collections —
Rabi, 1917-18
Kharif, 1918.

- an increase of about Rs. 1,60,000 in the capital outlay;
- the decrease in the area irrigated during *rabi* 1917-18 (the revenue on which was collected during the year) which was caused, as explained in last year's report, partly by a large area being sown and matured without receiving canal water and partly by the shortage of labour on account of recruiting activities and the prevalence of exceptionally severe malaria at the time of the *rabi* sowings, &c.

The figures for the year 1918-19 and the average of the preceding three years are compared below :—

Items.	Average triennium, 1915-18.	1918-19.
<i>Direct receipts.</i>		
Occupiers' rates ...	27,40,627	(a) 26,17,634
Miscellaneous receipts ...	63,992	(b) 65,285
Total direct receipts ...	28,04,619	26,82,919
Indirect receipts ...	10,25,226	(c) 15,94,182
Total direct and indirect ...	44,29,845	42,77,101
Working expenses ...	9,06,862	(d) 8,60,215
Net revenue ...	35,23,983	34,16,886
Percentage on capital ...	21.73	20.49
Net revenue less interest ...	29,91,174	558,856
Percentage on capital ...	17.94	17.13

(a) The decrease under the Occupiers' rates as compared with the average of the previous three years was due to causes explained in paragraph 6 above. The rate per acre assessed works out to Rs. 3.41 against Rs. 3.43 for the previous triennium.

(b) The increase under miscellaneous receipts was due to larger realizations from water power and miscellaneous other receipts.

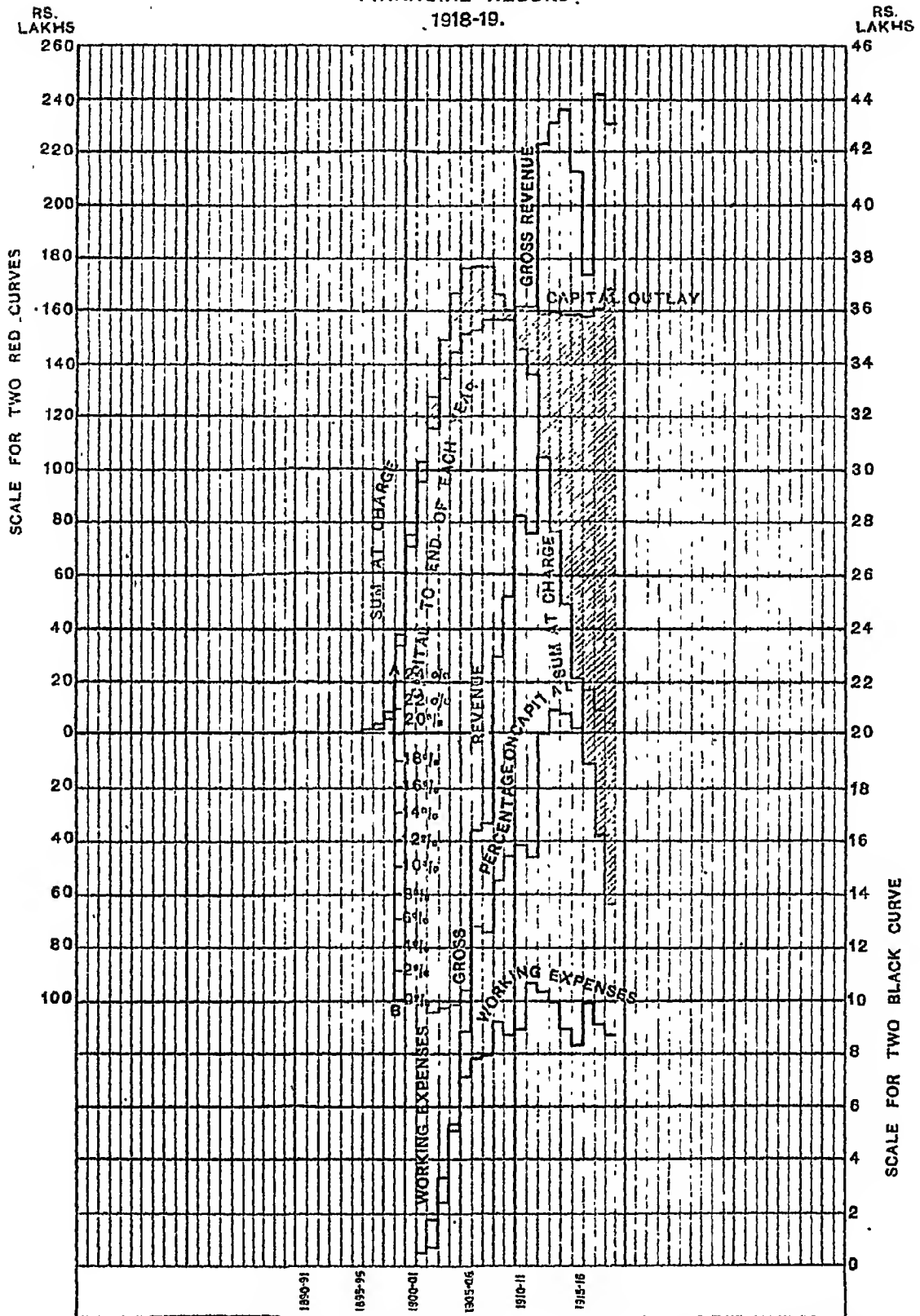
(c) The decrease follows the decrease under (a) above.

(d) The working expenses were about Rs. 45,000 less than the average of the last three years. This was due to curtailment of expenditure on maintenance of channels.

The rate per acre of area assessed was Rs. 1.12 against Rs. 1.15 in the preceding triennium.

LOWER JHELUM CANAL.

FINANCIAL RECORD.
1918-19.



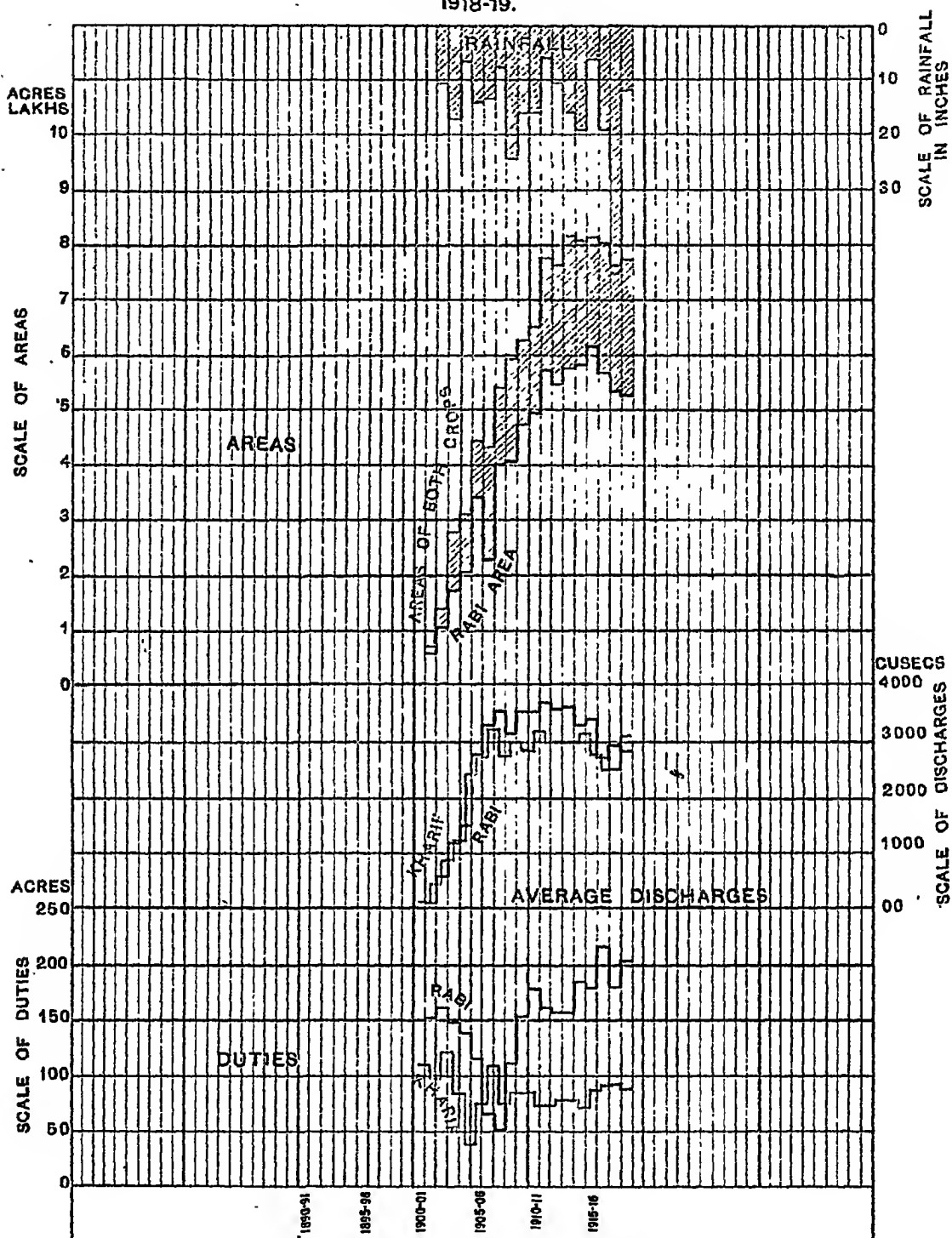
N.B.—The intercepts in the red area show arrears of interest which, added to the capital, give the sum at charge.

The intercepts in the blue area give the accumulated profits.

The scheme was commenced in earnest in 1898-99 and opened in 1901. Until 1905-06 the canal did not pay any interest on its capital cost this being due to free remissions of water rates on new irrigation.

LOWER JHELM CANAL.

WORKING RECORD.
1918-19.



N.B.—The intercepts in red area give the Kharif irrigation each year. The discharges are measured at mile 14 of the main canal and give averages for each crop. The duties are derived from these areas and discharges.

7. (a) The agricultural and other conditions of the year have been described in paragraph 4 above. The relative performances of the last five *rabi* seasons may be compared by the following values of Δ (Delta):—

<i>Rabi</i> , 1914-15	...	...	...	= 1.96
<i>Rabi</i> , 1915-16	...	...	...	= 1.6
<i>Rabi</i> , 1916-17	...	...	...	= 1.5
<i>Rabi</i> , 1917-18	...	...	...	= 1.7
<i>Rabi</i> , 1918-19	...	...	...	= 1.97

(b) The following works were completed during the year :—

- (1) Bay No. 1 of Rasul Weir : Crest wall raised to 711.5 and shutters removed.
- (2) Bays Nos. 3 to 9 of Undershutes : new gates installed.
- (3) Telegraph offices and Signaller's quarters at Rasul and Bahad-Din.
- (4) A block (4 units) of Senior Clerks' quarters at Rasul.

The following works are in progress :—

- (1) Remodelling Main Line, Lower Jhelum Canal.
- (2) Remodelling Rattokala distributary.
- (3) Lower Subordinates' quarters at Rasul.
- (4) Remodelling Lalian and Bueha distributaries with their minors.

The remodelling works on several other distributaries, estimates for which have been sanctioned, could not be pushed on owing to shortage of labour and stringency of rates. Efforts are now being made to import labour from other centres.

(c) A satisfactory feature of the wheat crop was the improved outturn a benefit which is probably attributable to the rotational closures, as fewer waterings tend to produce better grain, although the straw may be somewhat less. Many zemindars are beginning to recognise this fact.

The American variety of cotton has almost entirely supplanted the "desi" variety, and, generally, with regard to the selection of seeds, zemindars are beginning to show more discrimination.

UPPER SUTLEJ INUNDATION CANALS.

(SUPERINTENDING ENGINEER,—MR. F. T. BATES.)

1. No expenditure was incurred during the year, but the canal received a credit of Rs. 5,027 under the suspense account (stock transactions) and this reduced the total outlay to end of the year to Rs. 18,12,296 (direct and indirect).

2. Expenditure amounted to Rs. 10,645 against Rs. 12,186 in the previous year and was chiefly incurred on constructing bridges at R. Ds. 16,000 and 17,719 Upper Sohag Canal, at R. D. 17,000 of Turbat Minor and at R. D. 50 Sahiba Minor; a well at Ladheval rest-house; and a wooden bridge at R. D. 15,000 Gulshah Minor, and also on remodelling outlets Wanawala distributary.

3. Expenditure amounted to Rs. 1,63,633 which, in addition to ordinary maintenance and silt clearance of channels, was incurred on the following works: Diversion out in Manak Dehka; constructing a 2.5' fall at the tail of Manak Dehka diversion cut, Khanwali Canal; digging a channel above Dalla bridge, Lower Sohag Canal; river discharge observations at Beas and Sutloj; raising and repairing banks, Khanwali Canal.

4. The following table compares the irrigation of the year with that of the year 1917-18 and the averages of the two previous triennia :—

CROP.		AVERAGE OF 3 YEARS ENDING				AREA IRRIGATED DURING				REMARKS.
		1914-15		1917-18.		1917-18.		1918-19.		
		Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Kharif	...	175,178	159,715	159,882	151,013	189,900	168,071	151,155	136,253	
Rabi	...	177,898	177,888	182,809	182,369	247,957	247,957	107,344	107,344	
Total	...	353,066	336,603	341,251	333,382	437,857	416,028	258,499	243,597	

The net area assessed during 1918-19 was less by 93,006 and 89,785 acres as compared with the averages of the two triennia ending 1914-15 and 1917-18, respectively, and by 187,431 acres as compared with 1917-18. This is quite satisfactory taking into consideration the fact that the monsoon of 1918 had commenced only in the middle of August and ceased early in September and that the river fell very low much earlier than usual in consequence of which the *kharif* and *rabi* crops, which required water during September, suffered severely.

5. The gross revenue collected amounted to Rs 8,41,909 and the working expenses to Rs. 3,76,397, giving a net revenue of Rs. 4,64,512 or a return of 25.63 per cent. on the capital invested. In the previous year the figures of net revenue and the percentage were Rs. 3,67,920 and 20.24. This favourable result was due to the very good *rabi* crop of 1917-18, the revenue for which was collected during the year.

6. (a) The following table shows the dates of opening and closing of the canals together with the corresponding dates of the previous year :—

NAME OF CANAL.	DATE OF OPENING.		DATE OF CLOSING.		NO. OF DAYS CANAL WAS IN FLOW.		REMARKS.
	1918.	1917.	1918.	1917.	1918.	1917.	
Katora ...	Afternoon, 7-5-18.	Forenoon, 9-5-17.	Afternoon, 30-9-18.	Afternoon, 19-11-17.	144	195	
Khanwah ...	Afternoon, 19-5-18.	Forenoon, 14-5-17.	Afternoon, 13-9-18.	Afternoon, 31-10-17.	105	141	
Upper Sohag ...	Afternoon, 6-5-18.	Forenoon, 14-5-17.	Afternoon, 1-12-18.	Afternoon, 10-12-17.	203	211	
Lower Sohag ..	Afternoon, 1-5-18.	Forenoon, 14-5-17.	Afternoon, 1-10-18.	Afternoon, 25-11-17.	155	163	

(b) The river supply during the months of May, June and July was low and the canals were drawing a fair supply except the Julloke head of Khanwah Canal which, owing to the river starting erosion just above the head, got silted up early in June and it was only after a great deal of trouble and labour that it was partly set right in August. The Reserve Head Khizra of this canal also did not work as the river creek on which it was situated got silted up and was, therefore, poorly fed by the river. The New Kassoki Head of the Katora Canal got silted up towards the end of June due to river erosion, but the old Kassoki Head or its Reserve Head worked satisfactorily. There was no trouble with the Nijabat Head and the services of the Mokai, its Reserve Head, were not required. The river, however, attacked the new reach of this head and washed away a length of 1,500 feet.

There was no trouble with the Kbiwa Head of the Lower Sohag Canal and the Reserve Head, called the Upper Dona Head, was not opened. The river supply fell early in October and the Upper Dona Head was situated too far downstream to be in a position to help the canal at that time. The failure

of the monsoon was the real cause of a low river in October. There were no floods in the river during September. In fact the supply in the river had gone down to 10 feet in the 2nd week of that month.

This was a very unfavourable year for the inundation canals and the area under the *rabi* crops was comparatively small.

SIDHNAI CANALS (INCLUDING THE KORANGA, FAZAL SHAH AND ABDUL HAKIM, SUBSIDIARY CANALS.)

(SUPERINTENDING ENGINEER—MR. J. W. GILLMAN).

1. No expenditure was incurred during the year, but the suspense account was credited with Rs. 1,533 on account of stock transactions and this reduced the total expenditure (direct and indirect) to end of year to Rs. 13,30,67.

Capital account—
Kharif, 1918.
Rabi, 1918-19.

Settlers Account—The balance of Rs. 248-6-6 to end of the year 1917-18 on account of repairs to bridges on Sidhnai Canal was credited to Tacavi during the year and the account squared.

2. Expenditure was Rs. 8,833 against Rs. 7,696 in the preceding year and was incurred on remodelling distributaries and on constructing quarters for the use of subordinates at Jodhpur.

Extension and Improvements.

3. The expenditure amounted to Rs. 40,435 against Rs. 54,010 in the previous year. In addition to the usual maintenance of works the following were carried out:—

Maintenance and Repairs.

Providing Needles for Sidhnai Dam; special repairs to Sidhnai Dam, its downstream talus and the damaged buildings at Rashida; and strengthening banks Sidhnai Canal.

4. The total rainfall at Kabirwala was 5.81 inches (4.47 inches during *Kharif* and 1.34 inches during *Rabi*) against an average of 6.49 inches, and rain did no damage to standing crops.

Nature of season and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

The supply remained low throughout almost the whole year and the Sidhnai Canal was dry from 21st October 1918 to 4th February 1919.

The outstanding feature of the working of this canal during the year was that the winter supply was very deficient and in consequence wheat could not be sown extensively.

5. The following table compares the irrigation effected on the whole system with the figures of the year 1917-18 and the averages of the two previous triennia:—

Irrigation—
Kharif, 1918.
Rabi, 1918-19.

Crop.	AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED.	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
Kharif	127,037	121,380	131,207	121,212
Rabi	161,507	174,836	187,235	108,155
Total	278,544	295,716	318,442	229,367

The failed area in *kharif* amounted to 25,640 acres or 21.15 per cent. of the area irrigated against 19.97 per cent. in the previous year. During *rabi* 9,954 acres or 9.21 per cent. of the area irrigated were omitted against 8.29 per cent. in 1917-18.

The high percentage of *kharaba* was due to low supply in the river Ravi at head of the Sidhnai Canal.

6. The total income from all sources amounted to Rs. 8,11,923 against Rs. 7,01,625 in preceding year. Working expenses amounted to Rs. 95,788 against Rs. 1,58,769 in 1917-18. The net income was, therefore, Rs. 7,16,135 or 53·87 per cent. on the capital outlay against Rs. 5,42,856, or 40·75 per cent. in the preceding year.

The uncollected balance of the assessment of occupiers' rates amounted to Rs. 1,582.

7. The influenza epidemic was raging furiously all over the country during the months of September and October 1918 and this hampered the sowing of rabi crops considerably. Food stuffs were dear and fodder very scarce.

Owing to the close vicinity of the Lower Bari Doab Canal, there is general complaint of tenants going away to that canal. Rains in the hills and plains brought some water in February 1919 which proved helpful to the crops. Great damage was done by hail storm in April towards Hashida, Khanawal and Rawan.

No new works of any magnitude were undertaken owing to the war.

INDUS INUNDATION CANALS.

(SUPERINTENDING ENGINEER—J. W. GILLMON).

1. The expenditure (direct and indirect) amounted to Rs. 992 as compared with a credit balance of Rs. 1,598 in the preceding year. It was mainly incurred under the head "Suspense."

Capital account—
Kharif, 1918.
Rabi, 1918-19.

2. Rs. 25,713 were spent against Rs. 18,966 in the preceding year. The following were the more important works in progress :—

Extension and Improvements.

Improving Baja flood embankment and the Manka Canal from Gadai to Loharwal; constructing a wooden bridge at R. D. 120,500 of Shoria diversion; Leghari ring bund between bund No. 3 and Dhundi Kutab Canal; Groyne for the Dhundi Kutab Canal and Sahiban Canal and a diversion for the Kadra Canal; and building outhouses and stables for Fazilpur rest-house.

3. The expenditure amounted to Rs. 1,23,612 as compared with Rs. 1,90,140 in the preceding year. Ordinary maintenance and repairs, silt clearances of canals, strengthening of certain flood embankments and other miscellaneous works were carried out.

Maintenance and Repairs.

4. The rainfall during *kharif* was 1·90 inches and during *rabi* 1·25 inches against 11·55 inches and 1·38 inches in the preceding year and average of 4·21 inches and 1·59 inches for *kharif* and *rabi*, respectively, during the last 23 years. In May the river Indus rose sufficiently high for timely opening of the canals and this state continued up to June. But the supply soon after fell and remained low and consequently canal supplies were precarious. The river never rose above 33 feet. The demand was keen. Kadra was the only canal which worked well but little cultivation is done on this system. The Massuwah, Fazilwah, Manka, Kasturi and Dhingana Canals ceased to flow early. The Nur Dhundi and Sahiban canals ran throughout the winter with a small but extremely valuable supply of water.

Nature of season and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

The closing of creeks during September at heads of Nur Dhundi and Dhundi Kutab Canals at a cost of about Rs. 300 saved the crops on these canals.

The following statement shows the period during which canals were in flow :—

Name of Canal.	DATES OF		No. of days canal was in flow.
	Opening.	Closing.	
Maesuwah	19th May 1918...	9th September 1918.	110
Fazilwah	6th May 1918 ...	21st September 1918.	74
Manka	5th May 1918 ...	12th September 1918.	120
Shorin	4th May 1918 ...	30th September 1918.	149
Kasturi	6th May 1918 ...	5th September 1918.	93
Dhingana	5th May 1918 ...	7th September 1918.	123
Chibri	11th May 1918 ...	26th September 1918.	136
Sahiban	15th May 1918 ...	30th September 1918. 31st March 1919	195
Gamun	15th May 1918 ...	30th September 1918.	120
Nur Dhundi	15th May 1918 ...	31st March 1919.	314
Dhundi Kutab	15th May 1918...	5th October 1918	142
Kadra	15th May 1918...	22nd October 1918	159

Area irrigated—
Kharif, 1918,
Rabi, 1918-19.

5. The following table compares the areas irrigated during the year with the figures of 1917-18 and the averages of the two previous triennia :—

Crop.	AVERAGE OF 3 YEARS ENDING		1917-18.	1918-19.
	1914-15.	1917-18.		
	Acres.	Acres.	Acres.	Acres.
Kharif	173,025	152,702	140,042	121,144 (A)
Rabi	66,570	82,302	64,171	59,953 (B)
Total	239,595	235,004	204,213	181,097

The figures exhibited at (A) and (B) include the areas remitted which amounted to 40,852 acres in Kharif and 9,949 acres in Rabi.

The gross areas irrigated during *kharif* and *rabi* were 121,144 acres and 59,953 acres respectively against 140,042 acres and 64,171 acres during 1917-18. The decrease in irrigation during 1917-18 was due to damage done by the hill torrents in consequence of the heavy rainfall in the Suleman Hills which caused floods of unprecedented violence, and this year it is due to short supply and bad soil.

6. The total income from all sources was Rs. 4,29,790 against Rs. 4,41,690 in 1917-18 and the total expenditure under all heads amounted to Rs. 2,70,886 against Rs. 3,09,192. The net profit was, therefore, Rs. 1,55,904 (a percentage of 5.32 per cent. on the capital outlay)

Financial results based on collections—
Rabi, 1917-18.
Kharif, 1918.

against Rs. 42,508 or 1·42 per cent. in the preceding year and an average of Rs. 72,587 in the previous triennium

The uncollected balance of assessment of occupier's rate was Rs. 29,846

The year was one of unusual dryness owing to inadequacy of rainfall and low supply in the river and consequently the canals generally worked badly. The Fazilwah canal was eroded by river erosion during July 1918 from R. D. 2,000 - 4,800, and also there was erosion opposite subsidiary head of Dhundi Kutab Canal. The hill torrent water was also very restricted in quantity.

Influenza and malaria in very severe form, prevailed throughout, which caused much dislocation and a very large number of deaths occurred.

The damage to crops was also done by crickets (called *Tiddi*) during July which destroyed almost the entire sowings of *jowar* and cotton.

The following works of importance are either under contemplation or in hand:—

- (a) Remodelling of Kasturi Canal.
- (b) Providing masonry outlets on certain canals.
- (c) Remodelling of Dhingana.
- (d) Remodelling of Sohan Branch.
- (e) Remodelling of Sahiban Branch and Banuhan Branch.

On the above canals, water does not reach the tail even at times of high supply and a great deal of inconvenience is caused. Once these channels have their supplies equitably distributed, there should be an increase in revenue at a comparatively small cost.

Minor Irrigation Works.

SHAHPUR IMPERIAL INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. Expenditure amounting to Rs. 9,107 was incurred on construction of certain buildings.

Extensions and Improvements.

2. Rs. 16 were spent on minor works only.

3. Expenditure to the extent of Rs. 25,889 was incurred on silt clearance and on the usual maintenance and repairs.

4. The rainfall was 9·09 inches against 26·48 inches in the previous year. During the *kharif* season the rainfall was 6·49 inches and during the *rabi* 2·60 inches. Of the *kharif* rainfall 2·16 inches fell in April, 0·38 inches in June, 1·59 inches in July, 1·56 inches in August, and 0·81 inches in September. There was no rain during May 1918. During *rabi* the month of November was rainless and the rainfall in October and December to March aggregated to 2·60 inches only.

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The irrigation of the year compares as follows with the averages of the two previous triennia and with the figures of 1917-18:—

Crop.	AVERAGE FOR THREE YEARS ENDING		ACTUAL FOR	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acre.	Acre.	Acre.	Acre.
Kharif	18,786	15,589	17,648	5,825
Rabi	24,695	23,133	24,985	10,902
Total	43,481	38,722	42,633	16,727

The decrease is due to short supply in the river. The area successfully matured and assessed was 11,972 acres as against 39,518 acres in the previous year, and 35,849 acres the average of the previous triennium, the decrease being due to unfavourable rainfall and to the inadequate river supply.

Revenue was remitted on 4,755 acres, of which 1,140 acres were due to short supply, 2,810 acres to bad germination, and 805 acres to miscellaneous causes.

6. The gross revenue realised amounted to Rs. 82,097 and the working expenses to Rs. 61,010 leaving a net revenue of Rs. 19,087 which is equivalent to a return of Rs. 8.04 per cent. on the capital outlay to date.

Financial results based on collection
Rabi, 1917-18.
Kharif, 1918.

Details compare as follows with the averages for the preceding triennium :—

Details.	Average for the previous 3 years ending 1917-18.	Actual for 1918-19.
Receipts direct	81,209	61,479
„ indirect	30,059	20,618
Total ...	1,14,268	82,097
Working expenses	53,520	61,010
Net revenue ...	60,748	19,087
Percentage of net revenue on capital	28.14	8.04

The decrease under revenue is due to less irrigation and larger remissions during *Kharif* 1918 owing to the unfavourable season and to a larger expenditure under working expenses.

7. The Imperial Inundation Canals began and ceased to flow on the following dates :—

General remarks.

Name of Canal.	Began to flow	Ceased to flow	Period of flowing days.
Eastern Station Canal	1st May 1918 ...	25th August 1918	67
Western Station Canal	8th May 1918 ...	28th August 1918	59
Sahiwal Canal	9th May 1918 ...	29th August 1918	86

Owing to low supply in the river the water failed to enter the canals in September. They were opened in May and closed as early as August.

GHAGGAR CANALS.

(SUPERINTENDING ENGINEER—MR. G. C. LAURIE.)

1. Expenditure amounting to Rs. 3,872 was incurred in constructing a subordinate's rest-house at Jagmalera. This brought the outlay to date to Rs. 6,65,483 (Imperial Rs. 3,79,297, Contribution Rs. 2,86,186).
 Capital Account—
Kharif, 1918.
Rabi, 1918-19.

2. Expenditure amounted to Rs. 2,644 (Imperial Rs. 2,099, Contribution Rs. 525) and was incurred on petty works of improvement.
 Extensions and Improvements.

3. Expenditure amounting to Rs. 8,136 (Imperial Rs. 6,412, Contribution Rs. 1,724) incurred during the year was normal.
 Maintenance and Repairs.

4. (a) *Kharif*.—There were light showers of rain during June, July, August and September hardly sufficient to benefit the crops. The heaviest fall of 1.30 inches recorded at Otu, occurred on 26th August when it was too late for the *kharif* crop. Rainfall was considerably in defect throughout the area, and this, combined with serious insufficiency of supply in the reservoir, caused the *kharif* crop to be a complete failure.
 Nature of season and state of demand—
Kharif, 1918.
Rabi, 1918-19.

Water first reached Otu weir on 12th June but the supply remained very low, and it was only possible to open the Northern Ghaggar Canal, with less than one quarter of its full supply, for ten days for rice sowing. The canals were dry throughout July. During the first half of August the Northern Canal ran with an insignificant supply, and it was not until the 25th August that the canals could be opened with a satisfactory supply, while they were practically dry again by the end of September, though the Northern Canal continued to flow with an unimportant supply during the first half of October. Water passed over the weir from 27th August till 5th September. The Northern Canal was in flow for 52 days and the Southern Canal for 36 days.

(b) *Rabi*.—There was practically no rainfall except a very few light showers during January which were quite insufficient for maturing the crop. The area sown was small owing to the poor monsoon and even that small area gave poor results.

(c) *Rainfall*.—The average rainfall of all stations was British 3.70 inches and Bikaner 2.93 inches as compared with 35.60 inches and 29.88 inches respectively, during 1917-18. The rainfall was distinctly below the average, though that of the previous year had been abnormally great.

5. The following table shows the area irrigated in British and Bikaner territories during the last 5 years ending 1918-19. The area in British territory includes area assessed by the Civil Department.
 Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

Crop.	1914-15.			1915-16.			1916-17.			1917-18.			1918-19.		
	British.	Bikaner.	Total.	British.	Bikaner.	Total.	British.	Bikaner.	Total.	British.	Bikaner.	Total.	British.	Bikaner.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
<i>Kharif</i>	9,380	1,663	10,993	4,218	12	4,230	10,237	3,354	13,491	9,603	1,677	11,280	1,984	106	2,070
<i>Rabi</i>	15,060	6,403	21,463	17,788	3,156	20,944	18,090	8,783	26,873	12,220	6,994	19,214	9,508	1,242	10,750
Total	24,390	8,066	32,456	22,006	3,168	25,174	28,327	12,040	40,367	21,823	8,671	30,494	11,472	1,346	12,820
Total number of days canal was in flow.	Northern Canal. 102			50			92			123			52		
	Southern Canal. 100			56			93			122			36		

The figures in the above table do not include the area under *palever*.

The land under fluctuating assessment is not subject to water rates but the canals receive a credit for any fluctuating revenue in excess of an average of Rs.37,000 per annum during a ten years' period.

The amount of occupiers' rates assessed was Rs. 151 in *kharif* and Rs. 4,217 in *rabi* and the rate per acre assessed works out to 6.29 and 2.50, respectively.

6. The operations of the year resulted in a loss of Rs. 8,514 which is equivalent to 2.24 per cent. on the capital outlay compared with a loss of Rs. 12,165 equivalent to 3.23 per cent. in the previous year.

Financial results based on collections—

Kharif, 1918.
Rabi, 1917-18.

The question of the financial position of these canals was referred to the Financial Commissioners, Punjab, in May 1918 who left it for consideration till after the completion of the settlement operations in the Sirsa Tahsil of the Hissar District which were commenced only on 1st October 1919.

7. (a) *Agricultural and other conditions of the year.*—The Canals were in flow for a very short period as above stated.

The area remitted in British Territory was 28 acres in *kharif* and 330 acres in *rabi*.

The approximate value of crops matured on the Ghaggar Canals in British Territory amounted to Rs. 3,56,104 against Rs. 7,78,659 in the previous year. It will thus be seen that these canals are of great public benefit to a very dry tract.

The principal crops grown are wheat and rice.

(b) *Nature and scope of new works contemplated and progress made on the preparation of new projects.*—The proposal for raising the reservoir level by 3 feet has been deferred pending a decision regarding Bhakra Dam Project on the Sutlej River.

There is at present no other project for extending the canals or increasing the supply of water.

8. The following statement of irrigation has been supplied by the Bikaner State:—

Working of the Ghaggar Canals in the Bikaner State.

Canals.	1917-18.			1918-19.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Northern Canal ...	1,218	5,357	6,575	66	810	885
Southern Canal ...	459	1,637	2,096	40	423	463
Total ...	1,677	6,994	8,671	106	1,242	1,348
Flow ...	1,677	6,994	8,671	106	1,242	1,348
Lift ...	...	...	...	...	...	...
Total as above ...	1,677	6,994	8,671	106	1,242	1,348

The following table shows the working of the canals in the Bikaner State:—

Particular.				1917-18.	1918-19.
<i>Receipts</i>				Rs.	Rs.
Water rate ...	...	...	...	17,457	2,003
Miscellaneous ...	...	...	...	415	291
Total ...				17,872	2,294
<i>Working expenses.</i>					
Establishment ...	...	...	...	3,127	2,944
Other expenses ...	...	...	...	4,635	5,575
Total ...				7,762	8,519
Profit or loss (net) ...				10,110	—0,225

It will be seen that the Bikaner State suffered a loss of Rs. 2.18 per cent. on the working of the Canals for the year on the Contribution capital account of Rs. 2,86,186.

LOWER SUTLEJ IRRIGATION CANALS.

(SUPERINTENDING ENGINEER—MR. J. W. GILLMON.)

- These canals are classified under 43—Minor Works and Navigation for which no capital account is kept.

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

- The expenditure amounted to Rs. 1,05,050 against Rs. 43,496 in the preceding year. The more important works undertaken were:—

Extension and Improvements.

Two diversions—one escape of the head regulator for the Mailsi Canal; one diversion of the Mohammadwah Canal; making flood embankment between the Mailsi Canal and the Ghulamwah Canal; new head regulator for the Thadda Minor and Junction Channel to feed Sheikhwah Sharqia Distributary of the Bahawalwah Lodhran Canal; and remodelling Diwanwah Branch.

- The expenditure amounted to Rs. 86,510 against Rs. 92,240 in the preceding year and was incurred on ordinary maintenance of channels and silt clearances etc.

Maintenance and Repairs.

- The total rainfall during *kharif* was 2.10 inches in tehsil Lodhran and 2.29 inches in tehsil Mailsi against an average of 4.16 inches and 5.18 inches, respectively. During *rabi* it was 2.43 inches in tehsil Lodhran and 0.97 inches in tehsil Mailsi against the average of 1.25 inches and 1.10 inches respectively. The supply in the river was very low and the demand throughout the year was keen.

Nature of season and state of demand and supply—
Kharif, 1918
Rabi, 1918-19.

The following statement gives the dates of opening and closing of the Canals during the year:—

Name of Canals.	DATES OF		No. of days canal was in flow.
	Opening.	Closing.	
Hajiwah	5th June 1918 ...	12th Sept. 1918...	98
Mailsi	9th June 1918 ..	3rd Dec. 1918 ...	178
Mohammadwah	26th May 1918 .	6th Nov. 1918 ...	161
Bahawalwah-Lodhran	28th May 1918 ...	8th Oct. 1918 ...	132

Towards the end of the season the heads of the Hajiwah and Bahawalwah-Lodhran Canal silted up entirely, thus closing off their supply for the *rabi* irrigation. The Bahawalwah-Lodhran Canal continued to be supplied from Mohammadwah through the Haveli Connecting Channel but the supply in the Mohammadwah also being short, the irrigation on both was affected. The Mailsi Canal was closed before the supply failed owing to the necessity for drawing off the water at the site of the new escape.

- The following table compares the areas irrigated and matured in 1918-19 with the figures of 1917-18 and the averages of the two preceding triennia:—

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

Crop.	AVERAGE FOR THREE YEARS ENDING		AREA IRRIGATED DURING.	
	1914-15.	1917-18.	1917-18.	1918-19.
Kharif	141,378	144,410	161,821	96,984
Rabi	159,975	193,137	203,363	92,932
Total	301,353	337,547	365,184	189,916

The failed area amounted to 44,636 acres (37,276 during *kharif* and 7,260 during *rabi*) against 63,155 acres (46,454 during *kharif* and 16,701 during *rabi*) in the preceding year. Absence of any rain of appreciable intensity and shortage of water in the canals as a result of low river, accounted for deficient irrigation. *Rabi* sowings were also delayed on account of influenza. Some area on the Hajiwah Canal was also damaged by locusts during September.

6. The total income from all sources was Rs. 5,36,639 against Rs. 6,88,484 in 1917-18, and the total expenditure Rs. 3,44,927 against Rs. 2,52,089 in the preceding year. The net revenue amounted to Rs. 1,91,712 against Rs. 4,15,305 in 1917-18.

The uncollected balance of assessment of occupier's rate amounted to Rs. 1,243.

7. The year was an unfortunate one as regards irrigation on account of very serious and rapid river erosion which occurred in August and September 1917 opposite the Mailsi Canal, a short distance above the head and escape regulator at Islam. As a temporary expedient, a small diversion of the canal was excavated during 1917-18 which could carry about 3,000 cusecs safely, but as any breach in this diversion during the rain would have entailed the entire cutting off the supply, it became necessary this year to use a subsidiary head which gave less supply. Fortunately no heavy floods came and the new bunds at Islam were not breached.

Progress on works, more specially in the Mailsi Sub-Division was hampered by scarcity of labour caused partially by a malarial epidemic and partly due to a recruiting campaign, and criminal tribe labour was, therefore, introduced for urgent and important works in progress at Islam (Mailsi Canal).

No important works are contemplated at present.

CHENAB INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. J. W. GILLMON.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. There is no capital account for these canals. They are classified under 43—Minor Works and Navigation.

2. The expenditure was Rs. 6,884 against Rs. 16,172 in 1917-18, incurred mainly on piping the Shahpur Branch of the Sikandrabad Canal and the tail Panjani and Lang Minor of the Gajjubhatta Canal; building masonry outlets on the Sikandrabad Canal from Muzaffarahad to Ambala Regulator and making a new bund in the Bijli creek of the same canal.

3. The expenditure was Rs. 83,861 against Rs. 79,552 in the preceding year. It was incurred on silt clearances of the canals, repairing and strengthening bunds and banks, etc., etc.

4. The rainfall during *kharif* was 2.64 inches in tehsil Multan and 2.36 inches in tehsil Shujabad against the averages of 5.13 inches and 4.57 inches, respectively. During *rabi*, it was 1.11 inches in Multan and 2.05 inches in Shujabad against an average of 1.47 and 1.14 inches, respectively.

The river Chenab rose sufficiently high early in May and the Sikandrabad Canal, which requires water earliest as it has more indigo than any other and irrigates a large acreage of garden lands, was opened on 6th May 1918. This rise of the river continued for a short period only and it then dropped much below its normal level. The supply was throughout poor and

the canals had to run by rotation. The following statement gives the dates of opening and closing of canals : -

Canals.	DATE OF		No. of days canal was in flow.
	Opening.	Closing.	
Mattithal	31st May 1918	7th September 1918.	89
Daurana Langana	8th May 1918	22nd September 1918.	136
Wali Mohammad	8th May 1918	22nd September 1918.	136
Sikandrabad	6th May 1918	21st September 1918.	138
Gajjuhatta	6th May 1918	21st September 1918.	138
Bilochanwah	12th May 1918	12th September 1918.	107

The season was characterised by the absence of any rain of appreciable intensity and the canals ceased running in September as a result of low river, and their early closure accounts for deficient irrigation.

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The following table compares the areas irrigated during 1918-19 with the figures of 1917-18, and the averages of two previous triennia :--

Crop.	AVERAGE OF 3 YEARS.		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
Kharif	100,548	91,703	97,444	76,487
Rabi	99,581	109,831	131,598	50,142
Total	200,129	201,534	229,042	126,629

The area which failed to mature was 23,908 acres, or 31.25 per cent. of the area irrigated during *kharif* and 4,398 or 8.77 per cent during *rabi*.

Short supply due to abnormally low river and bad soil were the chief, if not the only, causes which accounted for these high percentages of remissions. Under the former head were remitted 22,656 acres or 29.56 per cent. of the total area irrigated during *kharif* and 1,298 acres or 2.59 per cent. during *rabi* whereas under the latter 1,195 acres or 1.56 per cent. and 24.47 acres or 4.88 per cent. were granted remissions during *kharif* and *rabi* respectively.

6. The total income from all sources during the year was Rs. 4,77,638 against 5,42,126 in 1917-18 and the total expenditure under all heads was Rs. 1,75,527 against Rs. 1,49,753 in the preceding year. The net income was, therefore, 3,02,111 against Rs. 3,92,373 in the preceding year.

Financial results based on collections—
Rabi, 1917-18.
Kharif, 1918.

The uncollected balance of the assessment of occupier's rate was Rs. 2,197.

General remarks.

7. Both the area irrigated and the area assessed were poor this year and the results were not satisfactory.

The influenza epidemic was raging furiously all over the country during the months of September and October and this hampered the sowings of the *rabi* crop considerably. Food stuffs were dear and fodder very scarce.

MUZAFFARGARH INUNDATION CANALS.

(SUPERINTENDING ENGINEER—J. W. GILLMON.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. No Capital Account is kept for these canals. They are classified under 43—Minor Works and Navigation and Agricultural.

2. The expenditure amounted to Rs. 21,764 against Rs. 38,759 in the preceding year and was incurred mainly on constructing an Inlet Regulator; making up retired bank, cut and diversion; excavating a new Minor; and also on piping and remodelling distributaries.

In addition to the above Rs. 1,752 against Rs. 3,427 during the preceding year were spent from the "Agricultural Fund" on the construction of a *pacca* well in the compound of Khangarh rest-house.

3. The expenditure amounted to Rs. 1,65,326 against Rs. 1,68,461 during 1917-18 and was incurred on ordinary silt clearances of the canals, and such works as repairing breaches and regulators; and strengthening and raising banks and bunds, etc., etc.

In addition to the above Rs. 25,135 against Rs. 25,616 in 1917-18, were spent from the "Agricultural fund" on maintenance of rest-houses and embankments.

4. The season was exceptionally dry, with an abnormally low record of rainfall. Early in May the rivers Indus and Chenab rose sufficiently high and remained so for a short period, up to about the end of June, after which the rivers dropped much below their normal levels and river supplies were lower than in the preceding year during the whole of the monsoon period. Consequently the supply in the canals was deficient and much below the average. Moreover, severe erosion set in close to the offtakes of the Taliri and the Karam Canals of the Chenab Series which resulted in the head of the former being choked up entirely towards the end of June and that of the latter being silted up heavily. In the Indus Series, the Magasson Canal was comparatively poorly supplied. The main stream of the river turned towards the west leaving shoals at the offtake of its feeding creek and almost choking it up.

The following statement gives the periods during which canals were in flow:—

Name of Canal.	DATES OF		Number of days canal was in flow.
	Opening.	Closing.	
<i>Indus Series.</i>			
Kot Sultan	1st May 1918 ...	9th October 1918 ...	160
Magasson	5th May 1918 ...	9th December 1918 ...	203
Maggi	5th May 1918 ...	3rd December 1918 ...	191
Ghutta	6th May 1918 ...	Flowing	306
Puran	11th May 1918 ...	ditto.	294
Suleman	5th May 1918 ...	1st November 1918 ...	179
<i>Chenab Series.</i>			
Karam	2nd June 1918 ...	5th September 1918...	54
Ganesh	17th May 1918 ...	18th September 1918	118
Taliri	15th May 1918 ...	14th September 1918	105

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The following statement compares the areas irrigated during 1918-19 with the averages of the previous two triennia and the figures of 1917-18:—

Crop.			AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED DURING	
			1914-15.	1917-18.	1917-18.	1918-19.
Kharif	...	...	157,873	156,072	160,548	121,739
Rabi	...	...	222,043	230,904	224,527	186,824
Total	...	...	379,916	386,976	385,075	308,563

The decrease in the area irrigated was due to the absence of any rain of appreciable intensity and to low supply in the rivers, particularly the Chenab which could not give sufficient supply to the canals taking off from it and also to unprecedented short supply in the Taliri and the Karam Canals.

6. The total revenue collected amounted to Rs. 6,39,841 against Rs. 6,99,691 in 1917-18 and the working expenses to Rs. 3,41,092 against Rs. 3,35,243. The net revenue amounted to Rs. 2,98,749 against Rs. 3,64,448 in the preceding year.

The uncollected balance of assessment of occupier's rate amounted to Rs. 10,945 against Rs. 21,453 of last year.

7. The year was very unfavourable from an irrigation point of view, yet owing to judicious distribution of the available supply results are better than might have been expected under the adverse conditions which prevailed. With a view to relieve the trying situation, some canals of the Indus Series, i.e., Ghuttu, Puran, and Maggi were opened during winter for rabi flushings which did immense good to rabi crops.

The Chenab river erosion necessitated the construction of new upper heads for the Karam and Taliri Canals, while a common upper head was constructed for the Kot Sultan and Magasson Canals due to the failure of the latter owing to the westward tendency of the river Indus.

No works of any magnitude could be undertaken owing to the necessity for economy arising from the war.

Prevalence of influenza resulted in some temporary dislocation of work during the year.

SHAHPUR (PROVINCIAL) INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. No capital account is kept for these canals.

Extensions and Improvements.

2. No expenditure.

3. Rs. 15,926 were spent on the usual maintenance and repairs and on silt clearance as against Rs. 13,603 in 1917-18.

4. The rainfall was 9.09 inches (Kharif 6.49 inches and rabi 2.60 inches) against 26.48 inches in the previous year. Of the Kharif rainfall 2.16 inches fell in April, 0.38 inches in June, 1.58 inches in July, 1.56 inches in August and 0.81 inches in September. The month of May was rainless. During rabi there was

Nature of season and state of demand
and supply—
Kharif, 1918.
Rabi, 1918-19.

no rain in November whilst in October, December, January, February and March the rainfall aggregated to 2·6 inches only. Owing to failure of summer rainfall the demand for canal water was naturally very keen. The supply in the river was insufficient. The canals did not work satisfactorily during the year. The date of opening and closing the canals were as follows :—

		Opening.	Closing.
Raniwah	...	2nd May 1918	28th August 1918
Corbynwah	...	8th May 1918	1st September 1918

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The area irrigated compares as follows with the averages of the two preceding triennia and with the figures of 1917-18 :—

Season.	AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18	1917-18.	1918-19.
Kharif	20,060	8,790	14,988	10,229
Rabi	10,351	10,338	10,097	2,954
Total	31,011	25,128	25,085	13,183

(a) The figures for the triennium ending 1917-18 give a false idea of the relative areas of *kharif* and *rabi* irrigation owing to the *kharif* irrigation of grass having been, in part of that triennium, incorrectly transferred to the *rabi khatauni*. This incorrect practice has now ceased, but it will necessarily vitiate the triennial averages for *kharif* and *rabi* for some years.

(b) The area successfully matured and assessed was 12,021 acres as against 23,708 acres of the preceding triennium. The decrease is due to unfavourable conditions of the river and failure of timely rainfall during the year.

(c) Revenue was remitted on 119 acres for short supply and 369 acres for bad germination. Besides this 674 acres were also remitted under Tenancy Rules.

Financial results based on collections—
Rabi, 1917-18.
Kharif, 1918.

6. The gross revenue realized amounted to Rs. 41,614. Details compare as follows with the averages of the previous triennium :—

Details.	Average for 3 years ending 1917-18.	Year 1918-19.
Total assessments (Direct and Indirect)	51,714	17,183
Receipts (Direct and Indirect)	50,086	41,614
Working Expenses	45,390	39,019
Net Revenue	4,696	2,595

There was a net profit of Rs. 2,595 on the year's working which is partly due to curtailment of expenditure on maintenance and repairs and partly to adjustment of Establishment charges proportionately according to works outlay instead of the fixed amount of Rs. 24,000 per annum.

General remarks.

7. (a) Designs for linking up the Raniwah Canal with the Shahpur Branch are in hand.

(b) Corbynwah is a small channel which irrigates principally pasture land, most of which is free from assessment.

SIMLA :

The 9th October 1919.

F. W. WOODS,

Chief Engineer, Irrigation Works, Punjab.

GOVERNMENT OF THE PUNJAB.
PUBLIC WORKS DEPARTMENT.

IRRIGATION BRANCH.

Part II.

STATISTICAL STATEMENTS FOR THE YEAR 1918-19.

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STATEMENT OF CANALS

MAJOR IRRIGATION

PARTICULARS.		MAJOR IRRIGATION.						
		Western Jamna Canal including Sirsa Branch, British and Patiala.	SINDH CANAL.		Upper Bari Canal.	Lower Bari Canal.	Upper Chenab Canal.	Lower Chenab Canal.
			British.	Patiala, Nabha and Jind States.				
1		2	3	4	5	6	7	8
Sources of supply		Jamna.	Sutlej.		Ravi.	Ravi and Chenab.	Chenab.	Chenab.
Minimum discharge of river.	Ever recorded, cubic feet per second.	2,167	2,780	...	1,272	00	3,884	3,884
	During the year	2,441	3,555	...	2,420	60	4,800	3,254
Maximum discharge of canal.	As designed	0,178	3,910	2,160	5,000	6,750	11,742	8,313
	Now authorised	0,430	5,461	3,050	6,705	6,750	11,674	10,780
	During the year	5,820	8,497	...	6,699	5,181	12,260	16,760
Average annual rainfall Inches		(a)40.32	(b)17.20	(b)18.74	(a)24.43	(b)10.07	(c)11.6	(c)13.44
Gross area commanded Acres		2,735,268	2,671,005	1,954,500	1,782,560	1,664,471	1,612,720	3,384,067
Culturable area commanded		2,815,077	2,273,467	1,029,000	1,591,346	1,379,951	1,532,112	2,680,506
Area proposed to be irrigated annually.	By complete project	803,555	764,511	420,000	821,666	877,008	648,207	1,500,000
	At present	693,555	750,000	420,000	821,666	810,071	658,294	1,726,195
Sanctioned Estimate—								
Direct charges Rs.		1,06,54,269	2,20,13,009	1,44,07,175	1,57,23,565	2,16,69,940	8,61,31,583	2,50,84,175
Indirect charges		7,50,277	12,73,126	...	...	6,64,422	12,25,441	8,31,791
Interest during construction		34,27,795	87,03,620	...	...	34,29,947	71,03,563	66,50,277
Total Estimate		1,47,32,341	3,20,03,755	1,44,07,175	1,57,23,565	2,57,68,349	4,44,60,592	3,31,66,248
Expenditure to end of 1918-19.	Direct charges	1,80,62,082	2,44,70,625	1,48,22,486	2,16,58,132	2,21,70,812	3,47,71,692	3,17,16,845
	Indirect charges	8,10,053	12,12,220	...	7,38,620	4,76,387	9,97,575	7,79,371
	Interest during construction.	32,03,904	85,45,401	...	1,01,97,038	39,00,649	68,09,516	64,52,313
Total Expenditure		2,20,81,128	3,42,31,255	1,48,22,486	3,89,93,800	2,65,40,848	4,40,78,783	3,89,48,529
Works as now sanctioned—								
Main Canals, irrigation Miles		82	89		80	132	173	40
Branch Canals		243	279	210	295			287
Branch Feeder Canals ... ..		...	...	...	10	...	...	...
Lower Chantang Nala Canal		4	...	...	...	...	...	...
Distributaries, irrigation		1,846	1,593	1,810	1,541	1,167	1,177	2,245
Lower Chantang Nala Canal Distributaries		45	...	...	...	...	...	...
Of above—								
Navigable Channels		121	92	46	...	...	...	...
Works completed to end of 1918-19—								
Main Canals, irrigation		82	89		80	132	173	40
Branch Canals		243	279	210	295			287
Branch Feeder Canals ... ..		...	...	...	16	...	...	...
Lower Chantang Nala Canal		4	...	...	...	...	...	...
Distributaries, irrigation		1,846	1,593	1,810	1,541	1,165	1,175	2,245
Lower Chantang Nala Canal Distributaries		45	...	...	...	...	...	...
Of above—								
Navigable Channels		121	92	46	...	...	...	...

NOTE.—Miles shown in this statement

*Salampur and

†Includes 4 miles

(a) Average rainfall for the last 40 years

(b) Ditto ditto 35 do.

(c) Ditto ditto 20 do.

(d) Ditto ditto 17 do.

(e) Ditto ditto 13 do.

IN THE PUNJAB.

WORKS.

MINOR IRRIGATION WORKS.

Upper Jhelum Canal.	Lower Jhelum Canal.	Upper Sutlej Canals.	Sindhri Canals.	Indus Irrigation Canals.	Shabpur (Imperial) Irrigation Canals.	GHAGGAR IRRIGATION CANALS.		Lower Sutlej Irrigation Canals.	Chenab Irrigation Canals.	Muzaffargarh Irrigation Canals.	Shabpur (Provincial) Irrigation Canals.
						British.	Bikaner State.				
9	10	11	12	13	14	15	16	17	18	19	20
Jhelum.	Jhelum.	Sutlej.	Ravi.	Indus.	Jhelum.	Ghaggar.		Sutlej.	Chenab.	Indus Chenab.	Jhelum.
4,514	...	3,001	...	9,439	...	...	...	2,580	808	808	...
8,416	400	3,300	...	23,420	400	...	...	4,439	1,785	...	400
8,500	3,800	4,935	2,120	...	1,100	1,000	500	5,555	5,103	7,534	933
...	3,750	...	2,605	...	1,100	1,410	550	...	...	...	932
8,511	3,044	9,378	2,890	5,812	503	1,028	323	5,600	4,169	9,713	682
16-07	(d) 12-40	(f) 10-30	(g) 6-48	(h) 5-08	(i) 14-73	(j) 10-09	(k) 13-84	(l) 5-58	(m) 8-29	(n) 5-53	(o) 14-04
503,690	1,863,398	989,730	380,077	879,108	67,007	86,324	44,904	918,208	453,473	771,311	80,928
583,090	1,162,465	699,838	841,159	422,923	62,954	72,978	84,618	905,152	860,313	674,932	59,255
316,830	666,921	840,997	150,000	305,750	47,750	40,534	17,809	250,000	200,000	850,000	27,000
316,830	666,921	329,184	150,000	305,750	42,000	48,334	17,809	250,000	200,000	850,000	24,170
4,32,40,232	1,88,95,782	13,36,378	9,62,383	8,67,908	2,05,083	9,59,692	3,07,365	...	...	...	...
10,56,277	5,83,200	46,400	37,092	10,729	9,981	10,029	...	...	...	...	...
73,20,746	32,98,554	...	89,080	...	...	...	...	...	...	...	...
5,16,17,305	2,22,62,542	13,82,778	10,38,661	7,07,635	2,15,914	3,69,723	3,07,365	...	...	...	...
4,40,87,521	1,62,68,361	17,11,255	12,90,449	29,01,360	2,14,690	3,53,407	2,86,186	...	...	...	...
9,12,453	4,08,698	1,01,041	40,225	80,385	10,331	10,890	...	...	...	...	...
55,23,443	63,63,714	8,87,000	2,12,511	6,86,207	...	...	...	...	...	...	...
5,35,23,416	2,50,41,293	26,99,388	15,43,155	36,67,952	2,25,021	3,79,297	2,86,186	...	...	...	...
488	39	329	68	443	53	44	53	402	266	419	83
40	104	...	...	...	18	...	...	...	...	...	18
...
...
886	1,011	395	255	301	72	34	...	804	64	725	52
...
...
488	39	329	68	443	53	44	53	402	266	419	83
40	156	...	...	...	18	...	...	...	...	...	13
...
...
636	938	395	255	301	72	34	...	804	64	725	52
...
...

are canal miles of 5,000 feet.
Faridnagar Channels,
or Bhimber diversion.

(f) Average rainfall for the last 20 years.
(g) Ditto ditto 30 do.
(h) Ditto ditto 52 do.
(i) Ditto ditto 20 do.
(j) Ditto ditto 16 do.
(k) Ditto ditto 9 do.

CAPITAL ACCOUNT OF THE IRRIGATION WORKS IN THE PUNJAB PROVINCE FOR, AND
TO END OF, 1918-19.

			DIRECT CHARGES (NOT EXPENDITURE).					Indirect charges exclusive of interest.	Total charges excluding interest.	Simple interest.
			Works.	Establishment.	Tools and Plants.	Surveys.	Total.			
1	2	3	4	5	6	7	8	9		
49-CAPITAL EXPENDITURE ON IRRIGATION WORKS NOT CHARGED TO REVENUE.										
IMPERIAL.										
Western Canal	Jumna	To end of previous year ...	1,51,27,054	33,24,22	2,17,026	2,13,010	1,03,22,312	2,10,217	1,70,02,523	2,41,47,373
	Branch.	During the year ...	— 2,057	— 208	— 48	23,801	10,222	— 135	10,157	5,98,144
Sirhind Canal	"	To end of previous year ...	1,74,48,602	40,32,71	21,06,025	2,20,217	2,44,16,216	12,12,161	2,60,31,981	3,17,00,570
	"	During the year ...	2,248	4 2	31	54,851	67,409	08	67,474	8,51,223
Upper Bari Canal.	Doab	To end of previous year ...	1,61,70,841	34,63,35	6,25,821	4,25,427	2,10,91,018	7,38,235	2,18,73,233	3,00,04,686
	"	During the year ...	7,522	2,0 4	140	6,63,831	5,61,114	881	5,61,479	7,44,273
Lower Bari Canal.	Doab	To end of previous year ...	1,01,63,815	20,94,114	10,45,701	7,47,019	2,10,01,085	4,66,505	2,21,61,550	40,51,575
	"	During the year ...	1,67,169	01,76	4,019	— 77,137	1,75,527	0,827	1,74,013	7,08,882
Upper Canal.	Chenab	To end of previous year ...	2,72,27,229	145,47,002	21,02,027	8,12,478	3,47,78,646	0,95,760	3,77,76,000	65,07,559
	"	During the year ...	60,730	1,6,110	085	— 71,010	— 8,184	2,116	— 0,639	12,10,523
Lower Canal.	Chenab	To end of previous year ...	2,58,52,075	48,35,136	0,41,661	4,10,668	2,17,70,409	7,70,153	2,58,18,071	2,43,43,143
	"	During the year ...	5,777	1,704	67	— 20,020	— 22,704	250	— 22,016	11,04,710
Upper Canal.	Jhelum	To end of previous year ...	3,20,01,627	40,20,418	43,18,800	0,41,041	4,11,55,890	8,81,033	4,10,37,819	1,00,37,108
	"	During the year ...	— 70,877	1,31,245	— 301	— 1,31,394	— 63,308	33,610	— 37,840	15,30,229
Lower Canal.	Jhelum	To end of previous year ...	1,23,60,180	22,10,410	3,01,210	3,07,470	1,63,32,670	3,61,423	1,62,26,129	80,69,660
	"	During the year ...	2,72,204	1,15,093	11,493	80,449	4,70,211	10,250	4,72,430	5,68,860
Upper Sutlej Inno-		To end of previous year ...	13,73,003	2,85,198	21,637	20,361	17,10,282	1,01,041	18,17,322	22,62,816
station Canals.		During the year ...	...	...	...	— 5,027	— 5,027	...	— 5,027	69,670
Sirhind Inundation		To end of previous year ...	0,45,638	2,64,017	39,029	44,278	12,02,002	60,225	12,32,117	33,72,891
		During the year ...	...	...	...	— 1,853	— 1,853	...	— 1,853	44,989
Iodna Inundation		To end of previous year ...	23,68,761	4,59,118	25,053	67,393	27,00,255	80,899	29,80,773	31,36,005
		During the year ...	— 667	— 90	— 3	1,065	1,065	— 12	903	1,01,002
Total		To end of previous year ...	16,73,62,909 + 500	3,20,07,830	1,30,05,015	43,40,143	21,68,07,018	13,98,146	22,33,05,164	16,18,40,030
		During the year ...	4,60,557	3,30,854	16,812	8,80,916	11,49,109	68,210	17,00,387	75,68,776
Construction.										
Western Canal.	Jumna	To end of previous year ...	9,02,188	2,80,542	23,708	...	11,00,478	...	11,00,478	...
	Branch.	During the year ...	...	...	...	...	...	...	...	...
Sirhind Canal	"	To end of previous year ...	07,49,683	38,71,073	12,01,601	...	1,43,31,257	103	1,43,31,800	...
	"	During the year ...	775	200	11	...	988	...	086	...
		Patela ...	82	21	1	...	104	...	104	...
		Nobha ...	70	18	1	...	89	...	89	...
		God ...	...	...	...	...	...	...	...	...
Total		To end of previous year ...	1,06,48,651	30,07,615	12,25,200	...	1,64,81,735	103	1,04,81,838	...
		During the year ...	637	238	12	...	1,179	...	1,179	...
48-MINOR WORKS AND NAVIGATION.										
Shekhar Canal		To end of previous year ...	1,70,060	80,220	613	...	2,05,933	0,881	2,16,914	...
		During the year ...	0,008	2,408	278	...	9,707	350	9,107	...
Ghaggar Canal		To end of previous year ...	2,91,640	02,502	7,023	...	3,65,565	10,793	3,76,167	...
		During the year ...	2,303	700	34	...	3,042	09	3,140	...
Ghaggar Canal		To end of previous year ...	2,59,621	44,280	2,634	...	2,85,454	...	2,85,154	...
		During the year ...	870	147	9	...	733	...	722	...
Total Imperial.		To end of previous year ...	4,09,700	93,092	8,536	...	5,71,293	20,778	0,02,071	...
		During the year ...	8,303	3,704	257	...	11,799	648	11,799 + 448	...
Total Contribution.		To end of previous year ...	2,33,634	44,266	2,584	...	2,85,454	...	2,85,451	...
		During the year ...	076	147	0	...	732	...	732	...
Jalalpur Canal		To end of previous year ...	28,079	19,321	3,004	...	01,004	2,706	33,709	...
		During the year ...	...	...	...	...	...	...	...	...

I C.

**STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION WORKS IN
THE PUNJAB PROVINCE FOR THE YEAR ENDING 31st MARCH 1919,**

**STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION
REALIZATIONS UNDER THE MINOR HEADS OF**

IRRIGATION.	REVENUE (ACTUAL RECEIPTS).											
	IRRIGATION.				Navigation.	Plantation.	Water power.	Miscellaneous.	Total.	Refund of revenue.	Gross receipts less refunds.	
	Water-rate directly paid.	Share of land revenue and sale-proceeds of waste and other lands.	Owners' rates.	Total.								
1	2	3	4	5	6	7	8	9	10	11	12	
PRODUCTIVE WORKS.												
IMPERIAL.												
Western Jumna Canal	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Western Jumna Canal	24,60,630	2,18,741	...	27,15,371	66,117	86,868	4,053	53,603	25,76,072	916	25,75,156	
Sikind Canal	24,75,316	99,450	...	25,33,766	11,418	88,061	1,32,219	1,13,407	26,66,861	2,082	26,67,116	
Upper Bari Doab Canal	37,52,367	6,67,186	...	44,39,553	...	37,449	1,23,819	5,08,089	51,09,534	3,111	51,06,423	
Lower Bari Doab Canal	21,00,730	24,80,522	...	45,87,252	...	6,492	...	1,00,300	46,01,100	261	46,03,639	
Upper Chenab Canal	10,30,624	1,10,140	...	10,40,763	...	400	...	36,557	10,39,220	685	10,37,335	
Lower Chenab Canal	88,37,116	75,80,123	...	1,65,17,239	817	26,457	16,064	61,659	1,66,21,619	801	1,66,24,217	
Upper Jhelum Canal	7,07,071	...	...	7,67,071	...	1,105	...	41,467	8,00,643	38	8,00,505
Lower Jhelum Canal	20,17,774	15,61,182	...	42,11,030	...	6,916	31,163	27,612	43,77,211	140	43,77,101	
Upper Sutlej Inundation Canals	5,41,647	2,53,150	...	8,30,007	...	2,223	...	9,766	8,41,768	177	8,40,000	
Sidhmal Inundation Canals	6,05,031	2,02,363	45	8,07,472	...	1,070	...	2,860	8,11,018	25	8,11,023	
Indus Inundation Canals	1,11,464	2,29,273	...	3,40,737	...	3,020	...	80,033	4,29,700	...	4,29,700	
Total	2,61,26,565	1,30,01,207	+46	3,07,39,677	77,852	1,64,506	3,07,366	10,42,702	4,13,23,163	8,341	4,13,14,012	
CONTRIBUTION.												
Western Jumna Canal	2,01,800	...	...	2,01,800	...	534	236	4,369	(a) 3,00,099	2	3,00,097
Sikind Canal	18,61,010	...	...	18,61,010	6,473	16,402	57,067	39,607	19,60,880	4,452	(d) 19,60,107
Total	21,63,810	...	...	21,68,010	6,473	16,936	57,303	40,900	22,50,049	4,454	22,76,104
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.												
CANALS IN OPERATION.												
Lower Sutlej Inundation Canal	2,55,479	2,77,755	...	5,33,234	...	1,687	...	1,793	5,36,714	75	5,36,639	
Chenab Inundation Canals	1,07,912	2,69,745	...	4,04,657	...	8,718	...	2,350	4,77,762	121	4,77,639	
Muzaffargarh Inundation Canals	2,60,537	3,71,778	...	6,31,365	...	6,543	...	2,213	6,40,121	280	6,39,841	
Total	7,12,078	9,19,278	...	16,31,250	...	16,948	...	6,305	16,54,697	476	16,54,119	
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.												
Shabpur Canal	61,479	24,618	...	82,097	...	...	...	...	82,097	...	82,097
Gaggay Canal	12,277	...	...	12,277	...	...	...	...	12,277	...	12,277
... { Imperial ... ..	...	...	...	...	...	...	...	...	...	...	...
... { Contribution	2,003	...	...	2,003	...	...	...	201	(b) 2,204	...	2,204
Total	73,756	26,618	...	100,374	...	...	...	...	84,374	...	84,374
... { Imperial ... ..	...	...	...	...	...	...	...	...	...	...	...
... { Contribution	2,003	...	...	2,003	...	...	...	201	(c) 2,204	...	2,204
PROVINCIAL.												
Shabpur Canal	29,454	12,130	...	41,614	...	...	...	...	41,614	...	41,614
Ravi Inundation Canals ... ..	...	...	...	...	...	...	...	...	...	...	...
Total	29,454	12,130	...	41,614	...	...	...	...	41,614	...	41,614

(a) Includes Rs. 1,242 credited to Patiala State through (b) and (c) include Rs. 20,037 and Rs. 31,860 respectively (d) Includes Rs. 61,047 raised through the Administrative (e) Includes Rs. 3,14,781, Rs. 82,507 and Rs. 36,424 spent (f) These figures have been reported by the Bikaner State. (g) Includes Rs. 2,363 (h) Includes Rs. 3,582 spent by the Bikaner State.

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION

No. of works.	Name of works.	GENERAL FINANCIAL RESULTS TO END OF 1918-19.								
		Mileage in operation.		Estimated cost of construction (direct and indirect).	Date of completion of work (P. W. D. Code, II, 1918).	Date when the system first came into operation.	Total capital outlay (direct and indirect).	Accumulated arrears of interest.	Accumulated surplus revenue.	Total sum-at-charge (column 7 + column 9).
		Main Canals and Branches.	Distributaries.							
1	2	3	4	5	6a	6b	7	8	9	10
	MAJOR WORKS.									
	PRODUCTIVE WORKS.	Miles.	Miles.	Rs.	Date.	Date.	Rs.	Rs.	Rs.	Rs.
		(a)	(b)							
1	Western Jumna Canal including Sirsa Branch.	294	1,740	1,74,75,813	1886	1820	1,77,11,688	...	6,51,00,023	1,77,11,688
2	Sirhind Canal ...	318	1,693	2,44,79,232	1891	1833-84	2,50,83,854	...	2,00,70,781	2,50,83,854
3	Upper Bari Doab Canal.	325	1,557	2,16,27,216	1878-79	1860-61	2,23,06,703	...	5,15,44,520	2,23,06,703
4	Lower Bari Doab Canal.	192	1,165	2,17,59,793	31st March 1917	1913-14	2,26,44,190	8,07,025	...	2,34,54,124
5	Upper Chenab Canal	173	1,175	3,51,44,803	31st March 1917	1913-13	3,57,09,557	66,40,263	...	4,24,15,830
6	Lower Chenab Canal	427	2,245	8,20,30,700	1899-1900	"	8,24,06,210	...	15,10,50,744	8,24,98,916
7	Upper Jhelum Canal	128	636	4,30,23,220	31st March 1917	1915-16	4,49,09,978	1,23,03,057	...	5,73,03,030
8	Lower Jhelum Canal	195	638	1,65,01,284	31st March 1917	1901	1,65,77,579	...	2,29,44,909	1,66,77,579
9	Upper Sutlej Inundation Canals.	330	395	17,07,010	1833-59	1855	(a) 18,12,296	...	39,53,301	18,12,296
					Lower Sohan and Parn 1835-58	1834				
10	Sidhni Canals ...	68	255	12,87,939	1880	1880	18,30,674	...	74,91,739	13,30,074
11	Indus Inundation Canals.	443	301	29,22,682	1819-60	Prior to 1849	29,81,745	7,07,027	...	30,83,772
	Total ...	2,633	12,050	22,04,62,378	...	...	22,45,11,551	2,08,54,272	31,30,63,237	24,53,65,823
	CONTRIBUTIONS.									
12	Western Jumna Canal	85	151	11,60,478	...	...	11,60,478	...	...	11,60,478
13	Sirhind Canal ...	219	1,810	1,43,18,817	...	...	1,43,22,436	...	...	1,43,22,436
	Total ...	254	1,961	1,54,79,295	...	...	1,54,82,914	...	...	1,54,82,914
	WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.									
14	Shahpur Canal ...	60	72	2,25,021	1870-71	1870	2,25,021	...	12,08,959	2,25,021
15	Ghaggar Canal { Imperial Contribution.	44	34	3,80,478	1893-99	1897	3,81,754	11,21,699	...	15,00,463
		53	...	2,85,442	...	...	2,86,186	...	...	2,86,186
Total {	Imperial Contribution.	110	106	6,05,499	...	...	6,00,775	11,21,699	12,08,959	17,81,474
		53	...	2,85,442	...	...	2,86,186	...	...	2,86,186
	WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.									
16	Lower Sutlej Inundation Canals.	402	304	...	1895	Were in operation prior to annexation of the Punjab by the British.	...	...	81,22,847	...
17	Chenab Inundation Canals.	208	64	...	1895		...	...	75,06,931	...
18	Muzaffargarh Inundation Canals.	619	725	...	1896		...	...	85,90,508	...
	Total ...	1,087	1,093	...	...	...	...	...	2,42,09,784	...
	Provincial.									
19	Shahpur Canal ...	55	52	...	...	...	...	...	2,78,251	...
20	Ravi Canal ...	...	...	...	...	...	...	...	...	...
	Total ...	55	52	...	...	...	...	...	2,78,251	...

* Opened as an Inundation Canal in 1887 and as a Perennial Canal in 1892.
 (c) Includes 4 miles and (d) 45 miles of the Lower Chautang Nallah Canal.

C.

WORKS FOR, AND UP TO THE END OF, 1918-19.

FINANCIAL RESULTS OF THE YEAR 1918-19.									
Gross receipts (direct and indirect).	Working expenses (direct and indirect).	Net Revenue.	Percentage on Capital outlay, column 7.	Percentage on amount-charge, column 10.	Interest at 5, 5 1/2, 6 per cent. on the direct Capital outlay to end of the previous year plus half the outlay of the year.	Net profit.	Net loss.	Area irrigated.	Percentage of working expenses to receipts (column 11 to column 12).
11	12	13	14	15	16	17	18	19	20
Rs.	Rs.	Rs.	%	%	Rs.	Rs.	Rs.	Acres.	%
28,75,151	18,41,447	15,33,707	8.60	8.60	5,98,111	9,15,363	...	6,58,595	46.65
28,67,716	11,61,638	16,95,949	6.68	6.56	8,51,223	8,31,620	...	8,67,875	41.21
51,00,423	15,22,509	37,81,114	16.69	16.69	7,44,273	30,50,811	...	10,65,040	25.80
46,80,639	11,71,791	35,21,935	13.55	15.01	7,68,852	27,53,053	...	6,78,004	21.56
19,87,333	12,80,096	7,09,339	1.97	1.70	12,10,823	...	5,04,494	4,26,861	61.16
1,88,21,247	23,71,976	1,42,49,271	43.85	43.85	11,01,710	1,31,44,501	...	23,39,198	14.25
8,00,505	7,37,617	62,950	.14	.10	15,36,223	...	14,73,369	2,46,009	32.11
42,77,101	8,00,215	31,16,896	20.49	20.49	4,53,956	28,59,030	...	7,77,493	20.11
5,40,959	3,76,397	4,61,512	25.03	25.63	50,670	4,04,612	...	2,53,439	41.76
8,11,921	6,79,88	7,16,135	53.62	53.82	41,935	6,71,177	...	2,26,307	11.79
4,29,799	2,70,989	1,58,904	5.33	4.30	1,01,002	57,902	...	1,61,097	69.02
4,16,14,912	1,10,11,431	3,09,00,511	13.60	12.31	75,08,776	2,47,09,689	19,77,958	77,49,983	29.05
						2,27,31,736			
1,282	61,101	-59,912	-5.16	-5.16	...	...	59,912	61,637	4,773.32
81,017	3,36,552	-2,55,535	-1.76	-1.76	...	...	2,62,535	5,37,526	400.13
85,829	3,97,716	-3,12,117	-2.02	-2.02	...	...	3,12,117	5,99,163	456.13
82,097	64,010	18,087	8.01	8.01	7,328	10,784	...	16,727	77.06
12,277	20,791	-8,514	2.21	.56	12,774	...	21,288	11,473	169.35
...	2,869	-2,869	.09	.80	...	...	2,869	1,315	...
81,374	81,801	9,573	1.67	.55	20,007	10,764	21,258	28,199	69.35
...	2,869	-2,869	.09	.09	...	...	2,869	1,343	...
5,33,639	3,44,027	1,91,712	...	...	...	1,91,712	...	1,89,916	61.27
4,77,639	1,76,627	3,02,111	...	...	...	3,02,111	...	1,26,029	36.71
6,30,841	3,41,092	2,89,749	...	...	...	2,89,749	...	3,06,563	58.89
16,54,118	8,61,640	7,92,572	...	...	...	7,92,572	...	6,35,708	52.68
41,014	39,019	2,595	...	...	...	2,595	...	13,183	93.76
...
41,014	39,019	2,595	...	...	...	2,595	...	13,183	93.76

III C.

STATEMENT SHOWING DEMANDS AND REALIZATIONS IN THE PUNJAB PROVINCE
FOR THE YEAR 1918-19.

Name of Canal.	Balance of demands remaining unrealized at the commencement of the year.	Demands during the year.	Total.	Delected exemptions not including cash refunds.	Net amount.	Realizations.	Amount unrealized at the close of the year.
1	2	3	4	5	6	7	8
XXIX—MAJOR WORKS— DIRECT REVENUE.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Water or occupier's rate.</i>							
Western Jumna Canal ...	73,761	25,70,764	26,44,525	1,41,510	25,03,015	24,82,230	21,86
Sirhind Canal ...	33,512	2,32,837	23,71,456	41,124	23,30,332	24,76,919	1,52,027
Upper Bari Doab Canal ...	36,841	33,00,079	33,73,520	41,237	37,32,283	37,32,107	49,176
Lower Bari Doab Canal ...	1,632	23,66,680	23,74,292	2,63,577	21,01,085	21,00,721	4,379
Upper Chenab Canal ...	1,68,189	18,52,124	19,80,297	1,21,170	18,59,127	18,52,621	65,704
Lower Chenab Canal ...	8,653	88,50,417	88,70,416	50,484	88,19,932	88,17,114	1,516
Upper Jhelum Canal ...	1,103	7,67,163	7,68,266	5,117	7,53,149	7,77,971	—1,823
Lower Jhelum Canal ...	6,157	23,10,349	23,26,506	793	23,25,713	23,17,771	7,976
Upper Sutlej Inundation Canals ...	7,465	6,26,482	6,33,947	40,838	6,13,109	6,31,811	1,612
Sutlej Inundation Canals ...	1,277	6,05,358	6,02,635	19	6,02,616	6,05,031	1,624
Indus Inundation Canals ...	32,225	1,07,235	2,39,799	61	2,39,738	(a) 1,22,551	1,17,187
Total ...	3,21,465	2,98,62,222	2,71,73,757	6,81,775	2,64,88,981	2,62,97,171	2,81,589
<i>Owner's rate.</i>							
Lower Chenab Canal ...	...	7,516	7,516	...	7,516	7,516	...
XXX—MAJOR WORKS AND NAVIGATION.							
<i>(Imperial.)</i>							
Lower Sutlej Inundation Canals ...	302	2,31,712	2,37,511	375	2,35,136	2,31,143	1,159
Mussliargah Inundation Canals ...	21,453	2,40,213	2,76,338	164	2,76,174	2,39,557	10,915
Chenab Inundation Canals ...	6,176	1,05,011	2,00,217	103	2,10,119	1,97,912	2,197
Hajiwah Canals ...	51	21,402	21,453	...	21,453	21,333	120
Shahpur Canal ...	—1	61,714	61,713	259	61,454	61,479	—25
Ghaggar Canal ...	...	19,551	19,551	1,274	12,277	12,277	...
Total ...	27,014	7,55,868	8,03,277	2,163	8,01,084	7,55,754	14,250
Shahpur Canal ...	65	20,322	30,497	853	29,519	29,481	65
Karnal Dam Canal ...	33	41,255	41,283	...	41,283	41,281	2
Total ...	118	74,577	74,635	856	78,837	78,769	68

(a) Includes Rs. 81,086 on account of Dhundl.

IRRIGATION WORKS.		Capital outlay Direct and Indirect to end of the year 1913-10.	REVENUE ASSESSED DURING THE YEAR.										Working expenses, Direct and Indirect.	Not assessed Revenue of the year.	Percentage on Capital outlay to end of the year.
			DIRECT ASSESSED RECEIPTS.									Grand Total.			
			Comptrol's rates.	Owner's rate.	Plantation.	Water power.	Navigation.	Miscellaneous.	Total.	Indirect receipts.					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.		
PRODUCTIVE WORKS.															
IMPERIAL.															
Western Jumna Canal	...	1,77,11,090	24,78,875	...	30,609	4,053	66,117	53,043	29,80,070	2,16,741	30,59,417	13,41,447	17,16,970	0 69	
Sirhind Canal	...	2,46,58,554	36,78,961	...	38,061	1,32,210	11,414	1,13,407	99,75,000	09,486	10,74,486	11,81,809	28,02,584	11 29	
Upper Bari Doab Canal	...	2,23,03,763	37,07,120	...	37,119	1,23,812	...	5,08,789	41,27,138	8,87,183	51,14,320	13,22,309	37,02,617	16 83	
Lower Bari Doab Canal	...	2,35,40,103	22,00,278	...	0,402	1,00,390	22,07,090	31,60,623	48,58,018	11,71,801	37,11,709	16 31	
Upper Chenab Canal	...	3,27,03,567	20,21,637	...	499	38,757	20,63,584	5,53,027	26,32,109	12,60,009	13,41,213	3 75	
Lower Chenab Canal	...	3,24,95,216	63,11,210	7,281	29,437	18,091	317	61,030	60,20,377	74,51,600	1,63,78,237	23,74,076	1,40,03,201	43 09	
Upper Jhelum Canal	...	4,40,00,073	8,61,471	...	1,103	41,467	0,81,046	5,50,213	15,50,209	7,37,645	8,12,623	1 61	
Lower Jhelum Canal	...	1,00,77,570	25,07,707	...	0,815	31,159	...	27,312	20,02,062	18,01,192	42,67,174	8,60,215	23,00,030	20 33	
Upper Satlej Inundation Canals	...	18,12,200	4,23,274	...	2,253	8,707	4,31,263	2,63,160	7,22,113	3,78,337	3,40,010	10 09	
Midland Inundation Canals	...	13,30,074	4,31,371	43	1,423	2,600	4,35,635	2,03,303	6,39,288	03,763	5,42,500	40 73	
Indus Inundation Canals	...	22,61,743	1,71,277	...	3,020	80,633	2,03,230	2,20,815	4,02,045	2,70,890	2,21,760	7 44	
Total	...	21,45,11,551	2,78,20,625	7,336	1,61,006	3,07,359	77,822	10,42,792	2,91,20,237	1,33,71,091	4,37,02,011	1,10,11,131	8,27,77,010	14 33	
CONTRIBUTION.															
Western Jumna Canal	...	11,60,378	2,61,691	...	531	230	...	4,750	2,60,840	...	2,60,910	1,02,081	1,60,850	14 39	
Sirhind Canal	...	1,43,22,430	23,80,700	...	10,402	67,007	6,473	26,607	21,07,330	...	21,07,330	7,75,567	17,21,772	12 02	
Total	...	1,54,82,814	20,41,471	...	16,936	67,233	6,473	40,509	27,07,170	...	27,07,170	8,78,519	18,89,531	12 20	
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.															
Shahjohr Canals	...	2,23,021	21,808	25,904	5,378	31,358	61,010	-32,021	11 50		
Ghaggar Canals	Imperial	2,64,754	4,303	4,308	...	4,308	23,701	-10,423	4 20		
	Contribution	2,59,189	2,435	201	2,723	...	2,726	19,610	-5,783	2 02	
Total	Imperial	0,06,775	20,170	30,176	5,373	35,761	84,801	-48,017	8 01		
	Contribution	2,59,189	2,435	201	2,723	...	2,726	8,610	-5,707	2 02	
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.															
Lower Satlej Inundation Canals	...	1,07,490	1,687	1,703	1,50,000	2,77,705	4,49,521	2,44,927	1,03,704	...	
Chenab Inundation Canals	...	1,60,100	9,710	2,850	1,71,205	2,08,715	4,30,050	1,76,527	2,01,183	...	
Metallfargah Inundation Canals	...	2,37,050	0,612										

* Figures reported by the Bilmar State.
† Includes Rs. 2,000 spent by the Bilmar State.

STATEMENT OF TRAFFIC ON CANALS IN THE PUNJAB DURING THE YEAR 1918-19.

Particulars.	Western Jamna Canal.	Sirhind Canal.
Length of Channel open for navigation ... Miles	121	138
Receipts—		
Tollage on private boats ... Rs.	187	1,855
" " Government boats ... "	...	...
" " rafts ... "	65,930	16,037
Carrying operations or transport service—	...	...
Hire of Government boats ... "	...	...
Refund of revenue ... "	...	...
Total receipts ... "	66,117	17,892
Maintenance charges, including special Navigation Establishment ... "	6,265	3,909
Not revenue of year ... "	59,852	13,983
Total number of boats plying cargo ...	...	...
" " " " passengers ...	...	...
Total registered tonnage cargo ...	...	...
" " " " passengers ...	...	...
Ton mileage, Up (a) ...	...	...
Down ...	...	...
Total ...	...	...
Estimated value of cargoes, Up (a) ... Rs.	...	...
" " " Down ... "	...	...
Total ... "	...	...
Number of passengers ...	...	30,198
Rafts, Up ... C.ft.	...	...
" Down ... "	2,067,719	1,870,302
Total ... "	2,067,719	1,870,302
Estimated value of rafts ... Rs.	2,003,700	13,45,984
Tollage on boats per ton per mile (a) ...	...	...
" " rafts per 100 c. ft. ...	3-19	0 86

(a) Details of boat traffic are not recorded (Government of India, Public Works Department, No. 78-I, dated 22nd April 1892).

II D.

DESCRIPTION AND QUANTITIES OF RAFT TRAFFIC ON CANALS IN THE PUNJAB DURING THE YEAR 1918-19.

Particulars.	WESTERN JUNNA CANAL.						SIRHIND CANAL.						TOTAL.					
	TOTAL.			PRIVATE.			TOTAL.			PRIVATE.			TOTAL.			PRIVATE.		
	Quantity in tons.			Value.			Quantity in tons.			Value.			Quantity in tons.			Value.		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I																		
RAFTS.	P.U.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.
Timber in logs round and squared	...						...	1,761	1,761	1,33,270	913	63,840	...	...	...	...	...	...
Sleepers, broad gauge	...						...	21,533	25,533	9,57,415	23,951	8,93,291	...	...	...	...	...	...
" metre "	...						...	4,271	4,271	1,12,103	3,846	1,00,949	...	...	...	...	...	...
Scantlings	...						...	2,733	2,733	1,53,143	2,451	1,84,508	...	...	...	...	...	...
Bamboos and reeds	...						...	1	1	24	1	24	...	...	...	...	...	...
Firewood	...						...	...	...	...	...	...	...	...	...	...	...	...
Total	...	38,716	38,716	29,03,700	35,716	29,03,700	...	34,209	34,209	14,45,984	31,137	11,97,053	...	73,015	73,015	42,49,681	69,353	41,01,352

NOTE.—According to the new system details under the Western Jumna Canal cannot be filled in.

IE with Appendix A.

STATEMENT OF AREAS IRRIGATED BY IRRIGATION WORKS IN THE PUNJAB DURING THE YEAR 1918-19.

NAMES OF CANALS.	AREA IRRIGATED, IN ACRES.										AVERAGE DISCHARGE, IN CUSECS.				AREA IRRIGATED, PER CUSEC.					
	NUMBER OF DAYS CANAL WAS IN FLOW.		Kharif.		Rabi.		TOTAL.		Flow.	Lift.	DOUBLE CROPPED.		AT HEAD less VOLUME FLOWED.		AT DISTRIBUTARY HEADS.		AT HEAD less VOLUME CAPED.		Kharif Rabi.	
	1	2	3	4	5	6	7	8			9	Area irrigated.	Percentage of area irrigated.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif Rabi.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Major Irrigation Works.																				
Western Jumna Canal (including Sirsa Branch, British and Native).	167	162	349,172	320,040	360,676	371,260	730,532	691,910	707,103	13,339	18,910	818	4,295	2,005	3,438	2,057	81	143	102	178
Sirhind Canal (British) ..	171	182	303,510	265,866	578,675	581,305	867,875	832,441	834,008	3,867	128,892	1,552	2,053	3,020	2,420	2,573	101	102	137	238
" " (Patiala, Nabha and Jind States).	171	182	218,910	218,079	318,259	318,910	537,536	535,073	535,073	2,453	119,810	23,29	2,369	1,035	2,155	1,553	93	105	101	219
Upper Bari Doab Canal ..	178	166	621,855	507,372	637,243	540,161	1,085,049	1,011,515	1,010,979	18,070	207,031	19,43	5,461	2,635	4,812	1,753	96	205	122	308
Lower Bari Doab Canal ..	166	139	325,533	256,431	353,411	353,411	678,001	616,187	655,762	22,212	5,103	2,23	4,353	3,740	3,749	8,064	71	94	87	115
Upper Chenab Canal ..	169	138	201,694	196,197	226,170	226,170	428,861	415,009	423,371	2,493	5,793	1,36	3,499	1,550	3,256	1,491	59	143	68	149
Lower Chenab Canal ..	171	173	703,515	759,192	1,613,653	1,613,653	2,339,108	2,309,552	2,309,552	39,066	147,504	6,31	9,521	7,315	7,759	8,349	84	211	103	243
Upper Jhelum Canal ..	171	177	91,823	91,312	151,747	151,747	216,669	212,071	210,599	11	2,801	1,14	1,570	932	1,400	1,036	63	108	63	147
Lower Jhelum Canal ..	169	170	251,601	223,653	625,895	625,895	777,496	775,203	775,203	2,333	14,402	1,86	3,128	2,850	2,607	2,035	80	182	94	200
Upper Sutlej Canals ..	165	165	151,155	130,253	107,344	107,344	269,493	263,603	263,603	2,637	17,512	6,77	3,285	3,285	3,285	3,285	79	70	70	..
Sutlnal Canals ..	135	35	131,512	95,672	108,186	108,186	229,397	103,803	223,774	5,923	2,254	1,0	1,519	1,519	1,519	1,519	150	150	150	..
Indus Irrigation Canals ..	123	22	121,144	74,763	69,933	69,933	181,097	121,706	173,417	7,650	175	0,09	3,329	2,829	2,829	2,829	64	64	64	..
Total ..	3,105,280	3,240,712	4,862,360	4,777,397	8,345,146	8,018,109	9,227,832	120,311	750,808	803	53	0,31	420	420	420	420	40	40	40	..
Minor Irrigation Works.																				
Shalpur (Imperial) Irrigation Canals	71	5,825	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	..
Ghaggar Irrigation Canals (British).	52	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	..
" " (Bikaner)	115	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	90,981	..
Lower Sutlej Irrigation Canals	121	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	76,487	..
Chenab Irrigation Canals	130	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	121,739	..
Muzaffargarh Irrigation Canals	75	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	10,229	..
Shalpur (Provincial) Irrigation Canals	...	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	313,334	..
Total ..	...	3,105,280	3,240,712	4,862,360	4,777,397	8,345,146	8,018,109	9,227,832	120,311	750,808	803	53	0,31	420	420	420	40	40	40	..

APPENDIX A TO STATEMENT I E.

STATEMENT SHOWING AREAS ON WHICH OCCUPIERS, RATES WERE REMITTED DURING THE YEAR 1918-19.

CAUSE OF REMISSION.	Kharif, 1918.				Rabi, 1918-19.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
WESTERN JUMNA CANAL.								
1. Wrong assessment ...	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
2. Escape irrigation	185	...	...	...	128	...	...
3. Under Tenancy Rules	3	...	...	...	8	...	...
4. Short supply	82	...	...	...	178	...	...
5. Hail	57	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal	...	143	...	...	...	35	...	...
9. Rats	7	...	...
10. Locusts
11. Other insects and blight	15,313	...	...	...	8,104	...	...
12. Bad germination or cultivation	7,399	...	...	...	803	...	...
13. Bad soil
14. High land
15. Miscellaneous	47	...	...	...	24	...	...
Total ...	326,040	(a) 23,103	349,172	0.62	307,570	(a) 4,484	371,360	1.21
SIRHIND CANAL (IMPERIAL).								
1. Wrong assessment	1	...	...
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	60	...	...	...	1,346	...	...
5. Hail	7	...	...	...	1	...	...
6. Frost
7. High wind	4	...	...
8. Flooding { (a) by heavy rain (b) from canal	...	393	...	...	...	8	...	...
9. Rats	3	...	...
10. Locusts	20	...	...
11. Other insects and blight	1,143	...	...	...	608	...	...
12. Bad germination or cultivation	154	...	...	...	307	...	...
13. Bad soil
14. High land
15. Miscellaneous	656	...	...	...	407	...	...
Total ...	303,866	2,044	305,910	0.68	578,575	2,790	591,365	0.48
UPPER BARI DOAB CANAL.								
1. Wrong assessment	10	...	...	...	18	...	...
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	830	...	...	...	2,110	...	...
5. Hail	29	...	...	...	52	...	...
6. Frost
7. High wind	152	...	...
8. Flooding { (a) by heavy rain (b) from canal	17	...	...
9. Rats	34	...	...
10. Locusts	1	...	...
11. Other insects and blight	16,242	...	...	...	...	...	...
12. Bad germination or cultivation	18	...	...	...	214	...	...
13. Bad soil	2	...	...
14. High land
15. Miscellaneous	437	...	...	...	314	...	...
Total ...	507,272	17,016	524,288	3.35	537,343	2,019	540,101	0.54
LOWER BARI DOAB CANAL.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules	19,814	...	...	...	38,435	...	...
4. Short supply	4,959	...	...	...	700	...	...
5. Hail	10	...	...	...	8	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal	104	...	...
9. Rats	167	...	...	...	2	...	...
10. Locusts
11. Other insects and blight	6,610	...	...	...	270	...	...
12. Bad germination or cultivation	6,784	...	...	...	6,923	...	...
13. Bad soil	22,274	...	...	...	12,239	...	...
14. High land	250	...	...	...	1,410	...	...
15. Miscellaneous	10,053	...	...	...	7,438	...	...
Total ...	259,434	68,109	327,543	20.3	285,708	66,708	352,411	18.45

(a) Detail of area remitted—

In the four Divisions	...	...	...	...	Kharif.	Rabi.
In Patiala State	...	...	...	...	22,882	4,250
In Jind State	...	...	...	...	284	284
	...	...	...	...	18	...
Total	...	...	...	...	23,182	4,484

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-10—CONTINUED.**

CAUSE OF REMISSION.	KARNAL, 1918.				RAJ, 1918-10.			
	Area actual.	Area remitted.	Total area irrigated.	Percentage remitted.	Area actual.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
UPPER JHELUM CANAL.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	104	...	...	...	42	...	...
5. Hall
6. Frost
7. High wind
8. Flooding (a) by heavy rain (b) from canal
9. Rate	92	...	...	...	...	...	...
10. Locusts
11. Other insects and Mites	1,000	...	...	...	...	...	...
12. Bad germination or cultivation	700	...	...	...	400	...	...
13. Bad soil	612	...	...	...	...	...	...
14. High land
15. Miscellaneous	140	...	...
16. Perpetual remission
17. Dog Anilish
Total ...	91,612	7,750	99,362	...	10,773	...	151,247	0.15
LOWER CHENAB CANAL.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules	100	...	...	...	14	...	...
4. Short supply	100	...	...	...	...	...	...
5. Hall
6. Frost
7. High wind
8. Flooding (a) by heavy rain (b) from canal
9. Rate	21	...	...	...	...	...	...
10. Locusts	100	...	...	...	...	...	...
11. Other insects and Mites	2,010	...	...	...	...	...	...
12. Bad germination or cultivation	700	...	...	...	1,000	...	...
13. Bad soil	1,014	...	...	...	1,000	...	...
14. High land	12	...	...
15. Miscellaneous	1,000	...	...	...	...	...	...
Total ...	78,000	7,000	85,000	0.08	1,000	...	1,000	0.00
UPPER CHENAB CANAL.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	700	...	...	...	23	...	...
5. Hall	71	...	...	...	...	...	...
6. Frost
7. High wind
8. Flooding (a) by heavy rain (b) from canal
9. Rate
10. Locusts
11. Other insects and Mites	2,010	...	...	...	...	...	...
12. Bad germination or cultivation	1,010	...	...	...	...	...	...
13. Bad soil	143	...	...	...	...	...	...
14. High land
15. Miscellaneous	3,101	...	...	...	1,000	...	...
16. Cotton remission
Total ...	100,100	8,400	108,500	0.08	210,471	2,000	220,170	0.00
LOWER JHELUM CANAL.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules	1,000	...	...	...	1,000	...	...
4. Short supply
5. Hall	11	...	...	...	...	...	...
6. Frost
7. High wind
8. Flooding (a) by heavy rain (b) from canal
9. Rate	200	...	...	...	...	...	...
10. Locusts
11. Other insects and Mites	2,772	...	...	...	...	...	...
12. Bad germination or cultivation	3,000	...	...	...	...	...	...
13. Bad soil	250	...	...	...	...	...	...
14. High land
15. Miscellaneous	100	...	...	...	...	...	...
Total ...	240,000	8,000	248,000	0.03	624,200	1,000	625,200	0.00

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-19—CONTINUED.**

CAUSE OF REMISSION.	KARNAT, 1918.				RABT, 1918-19.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
UPPER SUTLEJ INUNDATION CANALS.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
1. Wrong assessment	5	...	...
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	9,536	...	...	...	...	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal	695	...	...	...	...	...	...
9. Rats
10. Locusts
11. Other insects and blight	4,471	...	...	...	...	...	...
12. Bad germination or cultivation
13. Bad soil
14. High land
15. Miscellaneous
Total ...	186,253	14,902	181,155	9.86	107,844	...	107,844	...
SIDHNAI CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	18,787	...	...	...	3,559	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (1) by heavy rain (2) from canal (3) from river	4	...	...
9. Rats
10. Locusts
11. Other insects and blight	1,264	...	...	...	27	...	...
12. Bad germination or cultivation	10	...	...
13. Bad soil	5,426	...	...	...	5,893	...	...
14. High land
15. Miscellaneous	163	...	...	...	461	...	...
Total ...	95,572	25,640	121,212	21.16	98,231	9,954	108,185	9.21
INDUS INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	42,281	...	...	...	...	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (1) by rain (2) from canal (3) hill torrent (4) from river
9. Rats
10. Locusts	203	...	...	...	...	...	...
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil	3,809	...	...	...	9,949	...	...
14. High land
15. Scanty rain
17. Miscellaneous
Total ...	74,702	46,872	121,574	38.26	50,004	9,949	59,953	16.60

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-19—CONTINUED.**

CAUSE OF REMISSION.	KANAR, 1918.				RANI, 1918-19.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
CHENAB INUNDATION CANALS.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	22,222	...	...	...	2,222	...	...
5. Hall
6. Frost
7. High wind
8. Flooding { (1) by rain
(2) from canal
(3) from river
9. Rate
10. Locusts
11. Other insects and blight
12. Bad permission or cultivation
13. Bad soil	1,105	...	...	...	2,117	...	...
14. High land
15. Miscellaneous	27	...	...	...	2.2	...	...
Total ...	22,279	23,827	76,447	31.25	65,744	4,739	70,147	8.77
LOWER SUTLEJ INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	25,114	...	...	...	2,546	...	...
5. Hall
6. Frost
7. High wind
8. Flooding { (a) by heavy rain
(b) from canal
9. Rate
10. Locusts
11. Other insects and blight
12. Bad permission or cultivation
13. Bad soil	1,110	...	...	...	2,700	...	...
14. High land
15. Miscellaneous	540	...	...	...	5,115	...	...
Total ...	25,448	27,576	92,641	29.1	45,773	7,815	92,032	7.8
MUZAFARGARH INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	14,211	...	...	...	5,915	...	...
5. Hall	180	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain
(b) from canal
9. Rate
10. Locusts
11. Other insects and blight
12. Bad permission or cultivation
13. Bad soil	4,708	...	...	...	3,805	...	...
14. High land
15. Miscellaneous	197	...	...	...	2,781	...	...
Total ...	100,640	21,169	121,759	17.4	172,600	12,521	185,526	7.22

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-19—CONCLUDED.**

CAUSE OF REMISSION.	KHARIF, 1918.				RABI, 1918-19.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
SHAHPUR IMPERIAL CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	1,140	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation	1,810	...	...	...	1,080	...	...
13. Bad soil
14. High land
15. Miscellaneous	805	...	...
Total ...	4,015	1,810	5,825	81.07	7,957	2,945	10,902	27.01
GHAGGAR CANALS.								
1. Wrong assessment	8	...	...	...	...	...	...
2. Escape irrigation
3. Under Tenancy Rules	515	...	...
4. Short supply	70	...	...	...	380	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal	5	...	...	...	...	...	...
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil
14. High land
15. Miscellaneous
Total ...	1,992	(A) 75	2,070	3.77	9,905	(B) 845	10,750	7.86
SHAHPUR PROVINCIAL CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules	484	...	...	...	190	...	...
4. Short supply	119	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal
9. Rats
10. Locusts
11. Other insects or blight
12. Bad germination or cultivation	869	...	...	...	...	...	...
13. Bad soil
14. High land
15. Miscellaneous
Total ...	9,876	853	10,229	8.34	2,645	809	2,964	10.5
					(A)	(B)		
British	28	830		
Bikaner	50	515		
Total	78	845		

III E.

STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED IN THE
PUNJAB DURING THE YEAR 1918-19.

STATEMENT OF QUANTITY AND VALUE OF CROPS

[illegible]

IRRIGATED IN THE PUNJAB DURING THE YEAR 1918-19.

LOWER BAST DOAR CANAL.		UPPER CHENAB CANAL.		LOWER CHENAB CANAL.		UPPER JHELUM CANAL.		LOWER JHELUM CANAL.		UPPER SUTLEJ IRRIGATION CANALS (INCLUDING LOWER BORAH AND PARA CANALS).	
Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.
12	13	14	15	16	17	18	19	20	21	22	23
Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
210,291	1,78,74,000	123,040	1,01,63,818	696,501	6,18,77,053	104,205	78,16,375	523,813	2,10,47,780	42,504	83,57,810
6,516	2,99,000	5,375	2,47,250	12,761	8,60,709	4,231	2,77,243	6,163	4,48,067	1,863	1,08,054
5,683	3,68,944	120,341	1,01,40,104	32,074	21,25,874	8,257	7,20,610	3,558	6,10,104	21,631	14,21,214
31,118	22,00,000	7,014	3,50,700	102,197	50,63,486	0,031	2,10,741	21,682	12,61,750	6,856	4,58,012
139	6,680	2	80	850	27,440	894	38,360	10,780	4,51,000	876	36,150
3,176	65,290	127	3,810	0,623	2,01,620	1	20	...	...	32,912	6,88,360
...
3,070	1,63,070	18,810	7,73,899	10,071	6,54,011	15,438	8,02,770	38,000	2,007,658	...	1,02,860
1,300	62,684	12,304	1,63,074	35,003	23,68,554	0,008	2,10,692	26,120	10,80,773	2,305	7,700
40	1,000	7	175	110	2,750	...	...	6	160	303	...
2	50	1	16	1	15	...	...	201	0,016	...	...
28	50	140	2,620	260	8,320	1,003	21,800	2,302	40,010	223	4,460
0,270	3,51,533	17,071	870,021	25,678	23,00,000	1,680	75,372	10,491	10,84,632	20,461	9,01,735
873	11,250	832	21,000	1,620	55,870	190	5,070	3,171	93,130	31	620
5,701	76,429	0	180	4,369	97,700	...	...	113	2,210	35	700
8	240	...	...	...	...	...	...	34	1,020	...	...
077	18,810	...	...	2,005	61,850	...	...	028	18,810	509	15,210
...	...	6	120	21	525	...	...	3	40	40	1,200
3,600	1,37,000	360	0,223	11,073	3,10,050	...	...	2,450	61,250	350	0,250
5,401	1,35,100	637	18,175	10,477	5,11,820	0	225	16,637	3,88,075	20,631	4,10,690
...	...	704	14,051	21	420	...	...	...	...	...	...
681	11,600	20	600	1,010	25,475	1,301	31,775	4,358	1,00,700	630	15,700
...	...	75	1,500	143	2,060	8	60	...	...	1	15
...	...	...	...	...	...	12	150	...	...	...	...
...
205	10,400	104	15,620	3,623	2,80,760	631	49,020	1,051	84,320	53	3,180
...
620	21,800	...	...	374	14,050	...	...	365	14,200	352	7,050
187	7,630	...	...	...	...	...	...	...	...	160	5,500
...	...	...	...	83	3,120	...	...	...	...	107	5,450
...	...	...	...	35	535	...	...	...	...	...	...
...
182,105	1,50,88,305	12,818	12,04,412	315,067	3,05,61,000	23,689	23,11,698	89,942	81,51,549	38,212	31,35,544
110	3,570	369	10,740	834	23,020	...	...	330	16,170	214	4,580
250	0,000	55	1,650	2,633	78,970	181	3,620	215	7,350	...	1,425
...	...	...	...	10	680	...	...	10	090	65	...
...
30	1,500	...	...	01	9,880	3	150	4	80	...	615
...	...	...	...	53	090	...	...	122	5,660	25	...
...	...	...	...	82	2,460	18	510	133	5,900	...	...
...
2,073	1,49,600	102	0,000	777	30,027	320	16,920	107	17,633	583	33,831
5,812	2,87,300	11,085	5,70,000	61,005	40,83,770	303	27,162	0,007	5,42,633	32	1,025
8,414	4,20,700	10,350	5,12,700	141,640	72,18,510	17,319	11,02,010	88,151	51,12,760	188	18,431
0,465	3,23,400	721	30,200	3,076	1,30,470	1,829	68,400	0,057	0,16,123	327	16,039
600	15,000	61	3,300	1,100	60,830	84	5,570	300	27,601	...	...
...	...	25	1,350	10	610	...	...	16	1,335	...	...
...
...
120	10,080	4	320	1,055	1,62,480	...	...	0	480	41	2,050
10,080	8,04,300	1,600	80,000	31,107	16,67,000	3,410	1,72,450	13,011	0,80,550	35	1,050
115	4,000	1	40	125	5,000	8	120	217	8,090	11	420
10	300	...	...	183	4,800	...	...	23	090	...	...
921	46,020	4,301	2,31,720	4,051	2,32,550	...	...	...	...	...	...
23,551	0,95,360	1,062	60,080	60,181	34,05,210	0,303	3,75,710	52,000	30,80,360	14,001	5,80,180
...
12	1,200	25	0,800	0,628	8,62,800	82	5,200	1,093	1,00,500	202	20,200
1,892	1,31,740	401	27,490	6,171	4,31,670	215	17,160	1,215	8,50,160	70	4,500
...	...	...	...	121	3,030	15	450	163	4,500	...	...
...
1,213	60,050	160	7,900	13,821	11,32,030	135	5,750	1,038	08,900	...	...
8,171	2,46,180	10,643	3,23,490	117,203	55,16,180	1,443	43,270	14,370	4,39,380	1,036	31,630
1,130	35,900	1,071	60,150	7,784	5,33,620	11,568	3,65,680	4,070	1,49,780	24,703	2,47,030
10,022	5,70,000	4,630	1,80,170	110,749	31,00,770	...	...	801	10,630	17,009	5,15,010
270	6,760	4,929	1,23,200	22,638	8,05,000	407	12,425	4,470	1,11,075	62	2,300
5,777	10,51,414	0,463	0,70,868	50,448	83,27,020	5,823	7,11,010	5,530	7,11,480	2,801	5,44,451
...	...	16	800	250	12,080	587	20,270	0,531	3,28,520	...	...
1,463	37,050	270	0,700	3,003	67,000	0	225	010	16,250	...	...
...	...	...	...	263	5,800	...	...	6	120	1,203	35,300
539,015	4,21,60,111	392,431	2,76,42,098	2,618,450	10,45,40,630	233,123	1,85,54,691	708,099	6,00,31,010	210,467	1,27,81,057
...	...	1,272	...	3,813	...	...	...	...	...	...	...
4,800	...	21,855	...	7,803	...	4,601	...	7,835	...	...	...
2,015	...	10	...	131	...	61	...	435	...	140	...
37	...	...	...	30	...	4,233	...	...	...	...	...
...
...
540,187	4,21,60,111	416,068	2,76,42,098	2,623,858	10,45,40,630	242,071	1,85,54,691	708,019	6,00,31,010	240,607	1,27,81,051

STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED

NAME OF CROPS.			SIDING CANAL.		DRAINAGE CANALS.		SHARADA (IMPERIAL) CANALS.		OPAGAN CANALS (RUSSIAN).	
English.	Vernacular.	Scripture.	Area sown to (acres).	Value of value.	Area sown to (acres).	Value of value.	Area sown to (acres).	Value of value.	Area sown to (acres).	Value of value.
1	2	3	4	5	6	7	8	9	10	11
Cereals—			Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
Wheat
Barley
Rice
Millet
Oats
Miscellaneous
Grasses and Pasture		
Grass
Pasture
Legumes		
...
Oilseeds		
...
Drugs and Medicines		
...
Flowers		
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Grasses and Pasture		
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Drugs and Medicines		
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CONCLUDED.

IN THE PUNJAB DURING THE YEAR 1918-19—CONCLUDED.

[illegible]

Labore	1,761,900	1,815,356	1,541,323	Upper Bari Doab Canal	853,915	497,530	298,001	307,796	605,857	334,029	894,043	720,973	1082	3835
				Upper Sutlej Inundation Canals	231,895	99,950	20,248	16,911	30,779	31,199	47,718	73,915	877	3801
				Upper Chenab Canal	17,382	4,123	1,283	1,283	3,856	2,045	1,440	3,800	898	...
				Lower Bari Doab Canal	6,998	4,637	2,063	1,763	3,856	2,456	1,440	3,800	898	...
				Total	1,172,479	590,266	322,246	326,355	618,800	370,299	430,018	899,817	...	...
Montgomery	2,859,010	2,510,530	1,062,473	Upper Sutlej Inundation Canals	617,911	235,298	180,317	91,403	221,720	168,701	205,241	353,913	480	2307
				Hajira Canal	...	...	...	180	180	160	1,229	1,373	...	...
				Lower Bari Doab Canal	922,053	615,100	234,307	252,013	460,370	217,668	239,388	460,066	440	3006
				Upper Bari Doab Canal	...	...	...	...	...	...	1,239	1,233	...	...
				Total	1,540,964	850,337	364,684	843,693	708,279	378,319	440,085	822,604	...	...
Multan	9,704,008	9,256,597	1,294,882	Sikandar Canal	841,159	150,000	121,212	109,185	229,397	131,207	187,235	318,443	681	1764
				Chenab Inundation Canals	260,912	200,000	70,444	97,144	130,689	93,444	131,658	229,043	375	1885
				Lower Sutlej Inundation Canals	903,163	250,000	89,399	81,083	178,882	144,483	174,735	315,218	453	1935
				Hajira Canal	...	...	...	11,602	10,951	17,188	27,405	44,852	...	...
				Lower Bari Doab Canal	460,312	300,505	89,155	93,686	187,759	76,352	86,210	161,678	464	1876
				Total	2,080,936	900,205	389,810	349,715	733,601	460,761	600,219	1,072,973	...	...
Muzaffargarh	3,508,914	3,037,592	743,234	Muzaffargarh Inundation Canals	674,932	350,000	121,720	186,773	308,602	160,658	224,379	384,507	475	1964
Pera Ghati Khan	2,513,403	2,513,403	1,215,939	Indus Inundation Canals	432,923	305,780	121,144	89,953	181,097	110,042	61,171	204,213	233	1188
Gujranwala	3,491,865	2,221,822	1,540,801	Lower Chenab Canal	713,782	405,757	152,189	310,501	522,099	108,103	253,459	454,803	1115	3209
				Upper Chenab Canal	1,228,101	534,343	135,860	185,273	283,232	170,700	118,555	257,135	1375	3630
				Total	1,941,883	939,100	331,067	528,174	867,241	313,103	400,504	749,007	...	...
Lyalpur	3,122,382	1,913,446	1,468,211	Lower Chenab Canal	1,468,124	1,059,273	509,341	1,010,452	1,519,993	401,236	1,055,158	1,510,394	627	25087
				Upper Chenab Canal	95,293	61,441	17,371	20,131	37,505	21,782	14,309	36,160	980	3393
				Total	1,563,417	1,120,713	528,712	1,030,583	1,557,498	423,018	1,069,666	1,546,554	...	...
Jhang	2,171,725	1,969,078	849,072	Lower Chenab Canal	309,690	239,163	104,063	199,200	290,208	99,642	265,227	305,869	799	2844
				Muzaffargarh Inundation Canals	...	...	...	61	61	50	149	168	...	...
				Lower Jhelum Canal	323,638	164,876	40,199	77,635	118,034	38,003	83,857	121,643	700	1989
				Total	722,628	399,039	144,215	270,088	414,801	137,734	289,002	427,686	...	...
Shahpur	3,072,386	2,315,272	1,328,068	Lower Jhelum Canal	820,180	501,542	206,893	440,263	647,135	189,859	443,007	632,835	768	2558
				Shahpur (Imperial) Canals	62,054	42,000	5,835	10,902	16,727	17,618	24,985	42,833	800	2848
				Shahpur (Provincial) Canals	59,255	24,170	10,229	2,954	13,183	14,988	10,097	26,085	909	2048
				Upper Jhelum Canal	1,550	833	737	063	1,690	139	778	917	...	...
				Total	938,539	594,550	223,073	455,002	878,735	232,503	478,597	701,470	...	...
Gujrat	1,457,410	1,199,966	918,723	Lower Jhelum Canal	18,647	12,403	4,520	7,807	12,327	3,982	7,004	10,986	1607	3786
				Upper Jhelum Canal	562,140	315,692	94,125	160,794	214,919	67,089	109,020	173,089	...	...
				Total	680,787	328,095	98,645	168,601	267,246	71,081	116,024	187,076	...	...
Sialkot	1,280,606	1,136,700	918,184	Upper Chenab Canal	191,270	52,183	87,171	15,503	52,979	44,853	4,663	49,248	1591	5034
				Total	17,233,340	8,465,685	3,779,020	5,237,304	9,015,984	3,797,561	5,368,850	9,063,901	...	...

(a) Columns 6 and 7 exclude the "culturable area commandeered" and "area at present proposed to be annually irrigated" by the Native States Branches of the Sirhind Canal.

(b) Includes 47,314 acres irrigated on the Native States Branches of the Sirhind Canal.

(c) Ditto 27,931 ditto

(d) Ditto 423,781 ditto

(e) Ditto 308,497 ditto

(f) Ditto 81,451 ditto

(g) Ditto 43,743 ditto

and 61,637 acres by the Siron Branch, Western Jumna Canal, in the Patiala State, ditto

and 74,912 ditto

ditto

ditto

ditto

ditto

Authority.	Class.	Nature of crops.	RAST PER ACRE.		Fee.
			Flow.	Val.	
Irrigation Branch Notification No. 697-B, L., dated 30th June 1916.		WESTERN JUMNA CANAL INCLUDING SIRSA BRANCH. GOVERNMENT'S RATE.	Rz. A. P.	Rz. A. P.	
	I	Sugarcane	10 0 0	6 0 0	Crop.
	II	Rice and water-culture	6 8 0	4 0 0	Do.
	III	Onion, garlic, tobacco, poppy, hemp, vegetables, spices and melons.	5 6 0	3 8 0	Garden and orchards per half-year; the rest per crop.
	III-A	Wheat	8 0 0	3 4 0	Crop.
	IV	Cotton, clover, dyer's blue, and all other crops except wheat, grain, sugar, sugarcane, and melons.	4 0 0	2 8 0	Do.
	V	All other crops not otherwise specified ...	3 0 0	1 12 0	Do.
	VI	Grass, lucerne, alfalfa, turmeric, and other crops.	2 8 0	1 8 0	Do.
	VII	Crops grown on the "or" or "A" of a previous crop, the watering before ploughing and followed by a cash-crop in the same or next harvest.	1 4 0	0 12 0	Crop Watering.
	VIII	Water, drainage and waste water.			
		For any number of waterings in a year ...	1 4 0	0 12 0	Half-year.
		For one watering in a year ...	1 4 0	0 12 0	Do.
		For two waterings in a year ...	2 8 0	1 8 0	Do.
Irrigation Branch Notification No. 1031-L, dated 27th April 1920.		LOWER CHAUDHANG NALA CANAL. GOVERNMENT'S RATE.			
	I	Sugarcane	4 2 0	2 12 0	Crop.
	IV	Cotton, clover and lucerne	2 8 0	1 10 0	Do.
	V	Other all other crops	1 12 0	1 2 0	Do.
	VII	Special rates which may be made applicable to channels selected by the Local Government— A single watering before ploughing followed by a cash-crop.	1 2 0	0 12 0	Do.
Irrigation Branch Notification No. 773-B, L., dated 21st December 1904.		SIRSA CANAL. Zona I. <i>All lands irrigated by the British Government of the British Canal with the exception of those situated in the British Territory of the Government District.</i>			
	I	Sugarcane	12 0 0	6 0 0	Crop.
	II	Rice, onion, garlic, poppy, tobacco, dyer's blue and other crops, water-culture, melons, sugarcane, and vegetables, except turmeric.	5 4 0	2 10 0	Garden and orchards per half-year; the rest per crop.
	III	Cotton, clover, lucerne, tobacco, clover, lucerne, alfalfa, turmeric, and other crops in British and not specified.	4 0 0	2 0 0	Crop.
	IV	Grass, lucerne, alfalfa, turmeric, and other crops, except wheat, grain, sugar, sugarcane, and melons.	3 4 0	1 10 0	Do.
	V	Single watering before ploughing and followed by a cash-crop in the same or next harvest. Also crops grown on the "or" or "A" of a previous crop.	1 8 0	0 12 0	Each watering. Crop.
	VI	Special rates which may be made applicable to channels selected by the Local Government— A single watering before ploughing followed by a cash-crop.	2 4 0	1 2 0	

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	IRR.	
			Rs. A. P.	Rs. A. P.	
		SIRHIND CANAL—CONCLUDED.			
		ZONE II.			
		<i>All lands irrigated by the British Branches of the Sirhind Canal in the Fazilka Tahsil of the Ferozepore District.</i>			
Irrigation Branch Notification No. 273-R. I., dated 21st December 1904.	I	Sugarcane	10 0 0	5 0 0	Crop.
	II	Rice, orchards, gardens, poppy, indigo, dyes, drugs and spices, water-nuts, maize, wheat, vegetables (except turnips).	5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.
	III	Cotton, oilseeds, melons, tobacco, fibres, harley, oil-seeds, berseem, saji, all non-fodder crops in kharif and rabi not specified.	3 12 0	1 14 0	Crop.
	IV	Wheat, jowar, chani, mooh, mung, mash, guar, chana, masur, gram, turnips, peas, and all kharif and rabi fodder crops not specified.	3 0 0	1 8 0	Do.
Irrigation Branch Notification No. 624-R. I., dated 12th May 1913.	V	<i>Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.</i>	1 8 0	0 12 0	Each watering.
		<i>Also crops grown on the "wadls" of a previous crop.</i>			Crop.
		<i>All lands irrigated by other than the British Branches of the Sirhind Canal.</i>			
Irrigation Branch Notification No. 6616-I., dated 27th November 1889.	I	Sugarcane, rice, water-nuts	7 8 0	5 0 0	Crop.
	II	Gardens, orchards, tobacco, poppy, vegetables, indigo, maize.	4 8 0	3 0 0	Do.
	III	Cotton, fibres, all dyes (except indigo), all rabi crops (except gram and masur).	3 12 0	2 8 0	Do.
	IV	All kharif crops not specified above and rabi crops of gram and masur.	2 10 0	1 12 0	Do.
Irrigation Branch Notification No. 624-R. I., dated 12th May 1913.	V	<i>Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.</i>	0 12 0	0 8 0	Each watering.
	VI	<i>Special rate which may be made applicable to channels selected by the Local Government—</i>			
		<i>A single watering before ploughing for rabi followed by a rabi crop.</i>	1 8 0	1 0 0	Crop.
		UPPER BARI DOAB CANAL.			
		OCCUPIER'S RATE.			
Irrigation Branch Notification No. 2621-I., dated 10th June 1891.	I	Sugarcane and water-nuts	7 1 0	3 8 0	Crop.
	II	Rice	6 0 10	3 0 5	Do.
	III	Orchards and gardens, tobacco, poppy and other drugs, vegetables, melons.	4 8 8	2 4 4	Orchards and gardens per half-year; the rest per crop.
	IV	All dyes, fibres, and oilseeds, all rabi crops except gram and masur.	3 12 0	1 14 3	Crop.
	V	All kharif crops not specified above, rabi crops of gram and masur, all fodder crops.	3 12 5	1 6 2	Do.

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	Rate per acre.		Per																																											
			Flow.	Lift.																																												
			Rs. A. P.	Rs. A. P.																																												
		UPPER BARI DOAB CANAL—continued.																																														
		Occupier's Rate—continued.																																														
Irrigation Branch Notification No. 62-B, L, dated 21st May 1918.	VI	Special rates which may be made applicable to following classes selected by the Local Government:—	2 0 4	1 0 2	Crop.																																											
		<table><tr><th>Dividee.</th><th>Name of channel</th></tr><tr><td></td><td><i>Main Line.</i></td></tr><tr><td rowspan="10">First...</td><td>Baharpur Feeder.</td></tr><tr><td>Fatimidpur Feeder.</td></tr><tr><td>Bujapur Mill Channel.</td></tr><tr><td>Fara Distributary.</td></tr><tr><td>Gulper Distributary.</td></tr><tr><td>Dhawanee Navigation Channel including Awank Distributary.</td></tr><tr><td>Patela Distributary.</td></tr><tr><td>Nanewagal Distributary.</td></tr><tr><td>Nanewagal Mill Channel.</td></tr><tr><td>Ghuchal Distributary.</td></tr><tr><td></td><td><i>Main Line, Upper.</i></td></tr><tr><td rowspan="5">Second...</td><td>Patela Distributary.</td></tr><tr><td>Fatevnargal Distributary.</td></tr><tr><td>Rasla Distributary.</td></tr><tr><td>Kot Karam Canal Distributary.</td></tr><tr><td>Konjar Distributary.</td></tr><tr><td rowspan="5">Second</td><td>Fatevnargal Distributary.</td></tr><tr><td>Kolla Distributary.</td></tr><tr><td>Tharawal Distributary.</td></tr><tr><td><i>Kumar Branch.</i></td></tr><tr><td>Jardala Distributary.</td></tr><tr><td rowspan="5">Fourth</td><td>Talawan Distributary.</td></tr><tr><td>Nawach Distributary.</td></tr><tr><td><i>Seventh Branch.</i></td></tr><tr><td>Besuli Distributary.</td></tr><tr><td>Allwat Distributary.</td></tr><tr><td></td><td>Vadala Distributary.</td></tr><tr><td></td><td>Diardho Distributary.</td></tr><tr><td></td><td>Gaggarbhana Distributary.</td></tr><tr><td></td><td>Blindar Distributary.</td></tr></table>	Dividee.	Name of channel		<i>Main Line.</i>	First...	Baharpur Feeder.	Fatimidpur Feeder.	Bujapur Mill Channel.	Fara Distributary.	Gulper Distributary.	Dhawanee Navigation Channel including Awank Distributary.	Patela Distributary.	Nanewagal Distributary.	Nanewagal Mill Channel.	Ghuchal Distributary.		<i>Main Line, Upper.</i>	Second...	Patela Distributary.	Fatevnargal Distributary.	Rasla Distributary.	Kot Karam Canal Distributary.	Konjar Distributary.	Second	Fatevnargal Distributary.	Kolla Distributary.	Tharawal Distributary.	<i>Kumar Branch.</i>	Jardala Distributary.	Fourth	Talawan Distributary.	Nawach Distributary.	<i>Seventh Branch.</i>	Besuli Distributary.	Allwat Distributary.		Vadala Distributary.		Diardho Distributary.		Gaggarbhana Distributary.		Blindar Distributary.			
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**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1916-19—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
Irrigation Branch Notification No. 625-Jt. I., dated 12th May 1913.		UPPER BARI DOAB CANAL—CONCLUDED.			
		OCCUPIER'S RATE—concluded.			
	VII	A single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest. Crops grown on the "wadā" of a previous crop	1 0 2	0 8 1	Each watering. Crop.
Irrigation Branch Notifications No. 649-R.I., dated 26th March 1907, No. 659-R. I., dated 11th December 1907, and No. 630-R. I., dated 2nd July 1908.	VIII	Village plantations on areas in which the provisions of Act III of 1893 have been extended and District Board plantations within the Chunian Colony— For any number of waterings in the kharif season. For one watering in rabi season For two or more waterings in rabi season	1 3 4 1 3 4 2 11 7	0 0 8 0 0 8 1 0 0	Half-year. Do. Do.
		LOWER BARI DOAB CANAL.			
		OCCUPIER'S RATE.			
	I	Cane and water-nuts ...	0 0 0	4 8 0	Crop.
Irrigation Branch Notification No. 517-R. I., dated 23rd April 1913.	II	Rice ...	7 8 0	8 12 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat.	5 0 0	2 8 0	Orchards and gardens per half-year; rest per crop
	IV	Cotton, fibre, dyer (other than indigo), oilseeds and all rabi crops, except wheat, gram, masur, senji, masha and turnips.	4 0 0	2 0 0	Crop.
	V	All kharif crops not otherwise specified ...	3 0 0	1 8 0	Do.
	VI	(a) Gram, masur, senji, turnips and masha ... (b) Crops grown on the "wadā" of a previous crop. (c) Single watering before ploughing for rabi followed by a rabi crop to be applicable only to channels selected by the Local Government.	2 4 0	1 2 0	(a) Crop, (b) and (c) acre
	VII	Grass, village and District Board plantations— For any number of waterings in kharif season. For one watering in rabi season For two or more waterings in rabi season	1 4 0 1 4 0 2 8 0	0 10 0 0 10 0 1 4 0	Half-year. Do. Do.
	VIII	(a) Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest. (b) Hemp (sun) and indigo which has been ploughed in as green manure before the 15th September.	0 8 0	0 4 0	Acre.

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		UPPER CHENAB CANAL.			
		OCCUPIER'S RAYS			
Irrigation Branch Notification No. 0223-B.L., dated 8th August 1912.	I	Cane and water-mulberry	0 0 0	4 8 0	Crop.
	II	Rice	7 8 0	3 12 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, millets and wheat.	5 0 0	2 8 0	Orchards and gardens per half-acre; rest per acre.
	IV	Cotton, flax, dyes (other than indigo), silkworms and all other crops, except wheat, grass, sugar-cane, maize and turnips.	4 0 0	2 0 0	Crop.
	V	All other crops not otherwise specified.	3 0 0	1 8 0	Do.
	VI	(a) Grass, pasture, sugar, turnips and lucerne. ... (b) Crops on the canal bank of a particular crop. (c) Single watering before ploughing for fall sowing in a particular crop, to be applicable only to fallow crops, to be decided by the Local Officers of the Canal.	2 4 0	1 2 0	(a) Crop, (b) and (c) acre.
Irrigation Branch Notification No. 024-B.L., dated 20th September 1918.		On Main Line, Upper.			
		Sub-branch			
		Rays of canal			
		On Main Line, Lower.			
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**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			RS. A. P.	RS. A. P.	
		LOWER CHENAB CANAL.			
		OCCUPIER'S RATE.			
		<i>Applicable to —</i>			
		(a) all estates in the Gujranwala District which were established before the 1st January 1892;			
		(b) all estates in the Jhang District which were established before 1st January 1892, except those which were transferred from the Montgomery to the Jhang District by Revenue and Agriculture Notification No. 370 of 5th May 1899; and such proprietary wells as are now or may hereafter be included within the boundaries of the Colony manzar;			
		(c) all estates in the Gujara and Montgomery Tahsils of the Montgomery District which were established by 1st January 1894; and			
		(d) all estates in the Multan and Lahore Districts which were established before 1st April 1902;			
Irrigation Branch Notification No. 617-R.I., dated 13th June 1903.	I	Sugarcane, water-nuts	8 0 0	4 4 0	Crop.
	II	Rice	0 12 0	3 10 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons.	5 8 0	3 0 0	Orchards and gardens per half-year; the rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds, maize and all rabi crops (except gram and masur).	4 4 0	2 0 0	Crop.
	V	All kharif crops not otherwise specified, and gram and masur.	3 0 0	1 12 0	Do.
Irrigation Branch Notification No. 638-R.I., dated 12th May 1913.	VI	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 12 0	1 2 0	Each watering.
		Also crops grown on the "wadā" of a previous crop.			Crop.
	VII	Single watering before ploughing for rabi followed by a rabi crop, to be applicable only to channels selected by the Local Government.	2 4 0	1 0 0	Acre.
Irrigation Branch Notification No. 6161-R.I., dated 12th October 1903.	VIII	Grass—			
		For any number of waterings in the kharif season.	1 4 0	0 10 0	Half-year.
		For one watering in the rabi season ...	1 4 0	0 10 0	Do.
		For two or more waterings in the rabi season	2 8 0	1 4 0	Do.
		<i>Applicable to estates other than those referred to in Notification No. 617-R.I., dated 13th June 1903, above.</i>			
Irrigation Branch Notification No. 22-I, dated 6th January 1892.	I	Sugarcane	7 8 0	8 12 0	Crop.
	II	Rice	6 4 0	3 2 0	Do.
	III	Orchards, gardens, tobacco, indigo, vegetables, poppy, dhanla, zira, sunnf, melons.	5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds, maize and all rabi crops (except gram and masur).	3 12 0	1 14 0	Crop.

Authority.	Class.	Nature of crops.	Rate per acre.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		LOWER CHENAB CANAL—continued.			
		ORIGINAL RATE—continued.			
	V	All Harif crops not otherwise specified, and green and leafy.	2 8 0	1 4 0	Crop.
Irrigation Branch Notification No. 626-R.L., dated 12th May 1913.	VI	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 4 0	0 10 0	Each watering.
	VII	Alfalfa grown on the "silt" of a previous crop.			Crop.
Irrigation Branch Notification No. 614-R.L., dated 12th October 1907, No. 313-R.L., dated 16th December 1907, and No. 761-R.L., dated 11th December 1907.	VIII	Onion, a Bitter melon, and other alliums and Bhendi & plantations in the Canal zone— For the first year of a change in the kind of crop. For the second and third years. For the fourth and fifth years.	1 4 0 1 4 0 2 8 0	0 10 0 0 10 0 1 4 0	Half year. Do. Do.
		Applicable to the following crops— In the Canal zone—			
		For the first year of a change in the kind of crop.			
		For the second and third years.			
		For the fourth and fifth years.			
		For the sixth and seventh years.			
		For the eighth and ninth years.			
		For the tenth and eleventh years.			
		For the twelfth and thirteenth years.			
		For the fourteenth and fifteenth years.			
		For the sixteenth and seventeenth years.			
		For the eighteenth and nineteenth years.			
		For the twentieth and twenty-first years.			
		For the twenty-second and twenty-third years.			
		For the twenty-fourth and twenty-fifth years.			
		For the twenty-sixth and twenty-seventh years.			
		For the twenty-eighth and twenty-ninth years.			
		For the thirtieth and thirty-first years.			
		For the thirty-second and thirty-third years.			
		For the thirty-fourth and thirty-fifth years.			
		For the thirty-sixth and thirty-seventh years.			
		For the thirty-eighth and thirty-ninth years.			
		For the fortieth and forty-first years.			
		For the forty-second and forty-third years.			
		For the forty-fourth and forty-fifth years.			
		For the forty-sixth and forty-seventh years.			
		For the forty-eighth and forty-ninth years.			
		For the fiftieth and fifty-first years.			
		For the fifty-second and fifty-third years.			
		For the fifty-fourth and fifty-fifth years.			
		For the fifty-sixth and fifty-seventh years.			
		For the fifty-eighth and fifty-ninth years.			
		For the sixtieth and sixty-first years.			
		For the sixty-second and sixty-third years.			
		For the sixty-fourth and sixty-fifth years.			
		For the sixty-sixth and sixty-seventh years.			
		For the sixty-eighth and sixty-ninth years.			
		For the seventieth and seventy-first years.			
		For the seventy-second and seventy-third years.			
		For the seventy-fourth and seventy-fifth years.			
		For the seventy-sixth and seventy-seventh years.			
		For the seventy-eighth and seventy-ninth years.			
		For the eightieth and eighty-first years.			
		For the eighty-second and eighty-third years.			
		For the eighty-fourth and eighty-fifth years.			
		For the eighty-sixth and eighty-seventh years.			
		For the eighty-eighth and eighty-ninth years.			
		For the ninetieth and ninety-first years.			
		For the ninety-second and ninety-third years.			
		For the ninety-fourth and ninety-fifth years.			
		For the ninety-sixth and ninety-seventh years.			
		For the ninety-eighth and ninety-ninth years.			
		For the hundredth and hundred-first years.			
		For the hundred-second and hundred-third years.			
		For the hundred-fourth and hundred-fifth years.			
		For the hundred-sixth and hundred-seventh years.			
		For the hundred-eighth and hundred-ninth years.			
		For the hundred-tenth and hundred-eleventh years.			
		For the hundred-twelfth and hundred-thirteenth years.			
		For the hundred-fourteenth and hundred-fifteenth years.			
		For the hundred-sixteenth and hundred-seventeenth years.			
		For the hundred-eighteenth and hundred-nineteenth years.			
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		For the hundred-twenty-sixth and hundred-twenty-seventh years.			
		For the hundred-twenty-eighth and hundred-twenty-ninth years.			
		For the hundred-thirtieth and hundred-thirty-first years.			
		For the hundred-thirty-second and hundred-thirty-third years.			
		For the hundred-thirty-fourth and hundred-thirty-fifth years.			
		For the hundred-thirty-sixth and hundred-thirty-seventh years.			
		For the hundred-thirty-eighth and hundred-thirty-ninth years.			
		For the hundred-fortieth and hundred			

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per																												
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		LOWER CHENAB CANAL—CONTINUED. OccUPIER'S RATE—concluded. <i>Applicable to the following estates selected by the Local Government—concluded.</i>	Rs. A. P.	Rs. A. P.																													
		<table><tr><th>Division.</th><th>District.</th><th>Settlement assessment circle.</th><th>Nos. of Chaks and Branch.</th></tr><tr><td>Upper Gucera</td><td>Lyalpur.</td><td>...</td><td>52, 61, 107 and 109, Bakh Branch.</td></tr><tr><td>Lyalpur...</td><td>Ditto</td><td>...</td><td>175, 211, 217, 235, 247 and 249, Bakh Branch.</td></tr><tr><td>Jhang</td><td>Jhang</td><td>...</td><td>675, 175, 476, 470, 484, 481, 181, 369, 409, 407, 418, 100, 209, Cotterd 506, Jhang Branch.</td></tr><tr><td>Berals</td><td>Lyalpur</td><td>...</td><td>177, 676, 281, 785, 607, 615, 616, 619, 621, 622 and 623, Berals Branch.</td></tr><tr><td>Lower Gucera</td><td>Ditto</td><td>...</td><td>321, Gucera Branch, Lower.</td></tr><tr><td>Upper Gucera.</td><td>Ditto</td><td>...</td><td>669, Gucera Branch, Upper.</td></tr></table>	Division.	District.	Settlement assessment circle.	Nos. of Chaks and Branch.	Upper Gucera	Lyalpur.	...	52, 61, 107 and 109, Bakh Branch.	Lyalpur...	Ditto	...	175, 211, 217, 235, 247 and 249, Bakh Branch.	Jhang	Jhang	...	675, 175, 476, 470, 484, 481, 181, 369, 409, 407, 418, 100, 209, Cotterd 506, Jhang Branch.	Berals	Lyalpur	...	177, 676, 281, 785, 607, 615, 616, 619, 621, 622 and 623, Berals Branch.	Lower Gucera	Ditto	...	321, Gucera Branch, Lower.	Upper Gucera.	Ditto	...	669, Gucera Branch, Upper.			
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Lower Gucera	Ditto	...	321, Gucera Branch, Lower.																														
Upper Gucera.	Ditto	...	669, Gucera Branch, Upper.																														
Irrigation Branch Notification No. 616-R. I., dated 1st June 1915.	IV	Cotton, fibres, dyes, other than indigo, oil-seeds maize, and all rabi crops except gram and masur	3 0 0	1 12 0	Crop.																												
	V	All kharif Crops not otherwise specified and gram and masur	2 0 0	1 4 0	Do.																												
		UPPER JHELUM CANAL. OccUPIER'S RATE.																															
	I	Cane and water-nuts	9 0 0	4 8 0	Crop.																												
	II	Rice	7 8 0	8 12 0	Do.																												
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat.	6 0 0	2 8 0	Orchards and gardens per half-year; rest per crop.																												
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds and all rabi crops except wheat, gram, masur, saji, maida and turnips.	4 0 0	2 0 0	Crop.																												
	V	All kharif crops not otherwise specified	3 0 0	1 8 0	Do.																												
	V1	(a) Gram, masur, saji, turnips and maida			(a) Crop.																												
		(b) Crops grown on the "wadi" of a previous crop			(b) Acre.																												
		(c) Single waterings before ploughing for rabi sown by a rabi crop to be applicable only to the following channels:—			(c) Acre.																												
		<table><tr><td rowspan="4">Main Line, Upper Jhelum Canal.</td><td>11-R. of Muchhina Kharif Distributary.</td></tr><tr><td>12-R. or Samanpindi Kharif Distributary.</td></tr><tr><td>13-R. or Saroki Kharif Distributary.</td></tr><tr><td>14-R. or Phalla Kharif Distributary.</td></tr></table>	Main Line, Upper Jhelum Canal.	11-R. of Muchhina Kharif Distributary.	12-R. or Samanpindi Kharif Distributary.	13-R. or Saroki Kharif Distributary.	14-R. or Phalla Kharif Distributary.	2 4 0	1 2 0																								
Main Line, Upper Jhelum Canal.	11-R. of Muchhina Kharif Distributary.																																
	12-R. or Samanpindi Kharif Distributary.																																
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Gufrat Branch, Upper Jhelum Canal.	2-L. or Phalla Dabaka Kharif Distributary.																																
		These channels will be open only between the 1st April and 15th October, both dates inclusive.																															
	VII	Grass, village and District Board plantations—																															
		For any number of waterings in the kharif season	1 4 0	0 10 0	Half-year.																												
		For one watering in rabi season	1 4 0	0 10 0	Do.																												
		For two or more waterings in rabi season	2 8 0	1 4 0	Do.																												
Irrigation Branch Notification No. 637-R. I., dated 6th June 1916.																																	

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRP.		Per
			Flow.	Inf.	
		UPPER JHELUM CANAL—CONTINUED.	Rs. A. P.	Rs. A. P.	
		OCCUPIER'S RATE—continued.			
	VIII	(a) Single watering before ploughing not followed by a canal irrigated crop in the same or next harvest.	0 8 0	6 4 0	Acrr.
		(b) Deep (rain) and infir which have been ploughed as green pasture before the 12th September.			
		LOWER JHELUM CANAL.			
		OCCUPIER'S RATE.			
Irrigation Branch Notification No. 67-B, L., dated 28th May 1912.	I	Sugarcane, water-mul	10 0 0	2 0 0	Crop.
	II	Rice	6 4 0	3 2 0	Do.
	III	Cauliflower, garden,	2 0 0	2 8 0	Outlets and gardens per (1/2 acre) 11. 1st per acre.
	IV	Cotton,	2 0 0	1 14 0	Crop.
	V	All other field crops,	2 4 0	1 4 0	Do.
Irrigation Branch Notification No. 67-B, L., dated 12th May 1912.	VI	Single watering before ploughing,	1 4 0	0 10 0	Both watering.
	VII	Single watering before ploughing,	2 8 0	1 4 0	Crop.
Irrigation Branch Notification No. 67-B, L., dated 11th December 1912.	VIII	Grain,	1 4 0	0 10 0	Half-year.
		For any	1 4 0	0 10 0	Do.
		For	2 5 0	1 4 0	Do.
		Application—			
		(1) All			
Irrigation Branch Notification No. 409-B, L., dated 29th March 1912, and No. 438 B, L., dated 3rd April 1912.	I	Sugarcane and water-mul	7 8 0	3 12 0	Crop.

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918 19.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		LOWER JHELUM CANAL—CONCLUDED.			
		OCCUPIER'S RATE—concluded.			
	II	Rice	4 0 0	2 0 0	Crop.
	III	Orchards, gardens, indigo, vegetables, drugs and melons.	5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.
	IV	Wheat	3 4 0	1 10 0	Crop.
	V	Cotton and oilseeds	3 0 0	1 8 0	Do.
	VI	Fibres (other than cotton), dyes (other than indigo), maize and all rabi crops other than wheat, gram and masur.	2 8 0	1 4 0	Do.
	VII	All other kharif crops, gram, masur and all crops grown for fodder (including turnips.)	2 0 0	1 0 0	Do.
Irrigation Branch Notification No. 638 R-I, dated 1.4.1918.	VIII	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 4 0	0 10 0	Each watering.
		Crops grown on "wadh" or moisture of a previous crop.			Crop.
	IX	Single watering before ploughing for rabi followed by a rabi crop, to be applicable only to channels selected by the Local Government.	2 8 0	1 4 0	Crop.
	X	Grass, village plantations in Colony villages and District Board plantations in the Colony—			
		For any number of waterings in the kharif season.	1 4 0	0 10 0	Half-year.
		For one watering in the rabi season	1 4 0	0 10 0	Do.
		For two or more waterings in the rabi season.	2 8 0	1 4 0	Do.
		UPPER SUTLEJ INUNDATION CANALS INCLUDING LOWER SOHAG AND PARA CANALS.			
		OCCUPIER'S RATE.			
		Lahore and Montgomery Districts.			
Irrigation Branch Notification No. 409-R. I., dated 17th April 1918.	I	Rice, gardens, pepper, cane	3 8 0	1 12 0	Acres.
	II	Cotton, melons, til and hemp	2 12 0	1 8 0	Do.
	III	All other kharif crops	1 12 0	0 14 0	Do.
	IV	Grasses and failed rabi crops	0 8 0	0 4 0	Do.
	V	All other crops	1 4 0	0 10 0	Do.
		SIDHNAI CANALS.			
		WATER-RATE.			
		Kabirwala and Multan Tahsils.			
			Rs. A. P.		
Punjab Civil (Revenue) Department letter No. 208, dated 11th December 1898.	I	Rice, fruits and vegetables, pepper, cotton, til, sugarcane, wheat and tobacco.	3 5 0		
	II	Other kharif crops	2 6 0		
	III	Other rabi crops	2 2 0		
		NOTE.—"Lift" rates to be half the "flow" rates.			

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	Rate per acre.		Per
			How.	Rate.	
			Rs. A. P.	Rs. A. P.	
		LOWER SURFACE INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		<i>Majidi Canals and Branches, Indraganah, Fardwan and Branches, Bahawalpur, Lodhian and Binnah.</i>			
Irrigation Branch Notification No. 5346-I, dated 14th February 1903.	I	Rice, gardens and pepper	2 4 0	1 11 0	Area of matured crop.
	II	Cotton, sugarcane and till	1 12 0	1 5 0	Do.
	III	Other kharif crops	1 8 0	1 2 0	Do.
	IV	Rabi crops	0 14 0	0 10 0	Do.
		NOTE.—Irrigation on grass land may be assessed at half the rates at the discretion of the Deputy Commissioner.			
		CHENAB INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		<i>Ghaffar, Sialkot, Sialkot, Sialkot and Sialkot Canals.</i>			
Irrigation Branch Notification No. 2136-I, dated 20th November 1902.	I	Rice, gardens and pepper	2 4 0	1 11 0	Area of matured crop.
	II	Cotton, sugarcane and till	1 12 0	1 5 0	Do.
	III	Other kharif crops	1 8 0	1 2 0	Do.
	IV	Rabi crops	0 14 0	0 10 0	Do.
		NOTE.—Irrigation on grass land may be assessed at half the rates at the discretion of the Deputy Commissioner.			
		<i>Majidi, Fardwan, Indraganah and Bahawalpur Canals.</i>			
Irrigation Branch Notification No. 01522-I, dated 25th September 1900.	I	Rice, gardens and pepper	2 4 0	1 11 0	Area of matured crop.
	II	Cotton, sugarcane and till	1 12 0	1 5 0	Do.
	III	Other kharif crops	1 8 0	1 2 0	Do.
	IV	Rabi crops	0 14 0	0 10 0	Do.
		NOTE.—Irrigation on grass land may be assessed at half the rates at the discretion of the Deputy Commissioner.			
		HAFIWAH CANAL.			
Irrigation Branch Notification No. 226-11-I, dated 11th November 1905.	III	In exercise of the power conferred by Section 23 (1) of the Punjab Minor Canals Act, 1905, (Punjab Act III of 1905), His Honour the Lieutenant-Governor is pleased to direct that for all irrigation from the Hafihwah Canal the following rates shall be levied per acre actually watered, namely:—			
		WATER RATE.			
	I	Rice, gardens and pepper	2 4 0	1 11 0	
	II	Cotton, sugarcane and till	1 12 0	1 5 0	

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRES.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		HADJIWALI CANAL—CONCLUDED.			
		WATER RATE—concluded.			
	III	Other kharif crops	1 8 0	1 2 0	
	IV	Rabi crops	0 14 0	0 10 0	
		Provided that on all irrigation, within the original grant of land made in the year 1880 to the late Ghulam Kadir Khan, of lands, the proprietary right in which is or may hereafter become vested—			
		(a) in the sons of lineal descendants of the said Ghulam Kadir Khan; or			
		(b) in Mian Muhammad Khan or Hafiz Muhammad Afzal Khan, the nephews of the said Ghulam Kadir Khan or their lineal descendants;			
		the rate per acre actually matured whether in the kharif or rabi shall be limited to the following rates, namely:—			
		Rs. A. P.			
		Flow 0 12 0 per acre.			
		Lift 0 0 0 „			
Irrigation Branch Notification No. 268-R.I., dated 16th November 1905.	---	In exercise of the power conferred by Section 29 (1) of the Punjab Minor Canals Act (Punjab Act III of 1905), the Lieutenant-Governor is pleased to direct that the following rates shall be levied on the Hadjiwali Canal in the Multan and Montgomery Districts, for the supply of water for purposes other than irrigation, viz.:—			
		<i>Purpose for which supplied.</i>	<i>Rate,</i>		
			Rs. A. P.		
		Brick-making and pier wall building ...	0 8 0		100 cubic feet.
		Laying concrete or brick or stone masonry ...	0 2 0		Ditto.
		Metalling road	10 0 0		Mile.
		Water supplied in bulk	1 0 0		2,500 cubic feet.
		Watering roadside or avenue trees	2 8 0		Canal mile of 5,000 feet for kharif crop.
			5 0 0		Canal mile of 5,000 feet for rabi crop.
Irrigation Branch Notification No. 0335-R.I., dated 19th September 1906.	---				
Irrigation Branch Notification No. 100-R. I., dated 30th January 1912.	---	Proviso.—Except within the limits of Civil Stations, Cantonments and Municipalities no charge shall be made for water used for the manufacture of bricks not subsequently burnt in a kiln or for pier wall building, if taken from a water-course or tank lawfully supplied from a canal, and no rate shall be levied for water supplied in bulk, under proper authority to village tanks exclusively used for domestic purposes or for watering cattle.			

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRY.		Per	
			Flow.	Lift.		
			Rs. A. P.	Rs. A. P.		
			RATE PER ACRY.			
			On the Kodra Canal.	On all other canals.		
			Rs. A. P.	Rs. A. P.		
Irrigation Branch Settlement No. 674-B, dated 1st October 1912.	---	Rice	1 5 0	1 0 0		
		" Wheat	0 12 0	0 8 0		
		" Barley	0 12 0	0 5 0		
		" Other	0 6 0	0 4 0		
		Average rate for the Indus Canal and Jampur Taluk.		1 1 0		
		<p>Resolved that all lands irrigated from the Indus Canal in the Indus and Jampur Talukas shall be subject to the same rate for the crops of rice, wheat, barley, and other crops as the lands irrigated from the Indus Canal in the Indus and Jampur Talukas.</p> <p>The Indus Canal is a canal of the Government and the lands irrigated from it are subject to the same rate for the crops of rice, wheat, barley, and other crops as the lands irrigated from the Indus Canal in the Indus and Jampur Talukas.</p>				
Irrigation Branch Settlement No. 1379-B, dated 8th October 1912.	---	In exercise of the powers conferred by section 25 of the North-West Frontier Province Act, No. 14 of 1912, as amended by Act No. IV of 1914, the Government of the Province of the Punjab do hereby direct that the rate for the crops of rice, wheat, barley, and other crops irrigated from the Indus Canal in the Indus and Jampur Talukas shall be the same as the rate for the crops of rice, wheat, barley, and other crops irrigated from the Indus Canal in the Indus and Jampur Talukas.				
		All crops	2 0 0		Acres.	
		Water supply for the purpose of the irrigation.				
		For building and repairing of the canal.	0 5 0		100000 feet.	
		For building and repairing of the canal.	0 2 0		100000 feet.	
		For building and repairing of the canal.	10 0 0		Mile.	
		Water supply in bulk	1 0 0		2,500 cubic feet.	
		Watering roads and avenues trees	5 0 0		Canal mile of 2,500 feet per crop.	
		SHAFUR (IMPERIAL) INUNDATION CANALS.				
		OCCUPIER'S RATE.				
		For the Canals in Shaipur and Shaipur Talukas.				
Irrigation Branch Settlement No. 1379-B, dated 10th November 1912.	---	Rice	3 5 0	1 4 0	Acres.	
		All other crops	2 5 0	1 4 0	Do.	
		Grass lands	1 4 0	1 4 0	Do.	

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19.—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per.
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		SHAHPUR (PROVINCIAL) INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		<i>Raniewal.</i>			
Settlement Report, 1887— 1894, paragraph 100.	...	Rice	8 8 0	1 4 0	Acre.
		All other crops	2 8 0	1 4 0	Do.
		Grass lands	1 4 0	1 4 0	Do.
		<i>Corbynwal.</i>			
		All crops	1 8 0	0 12 0	Acre.
		Grass lands	0 2 0	0 1 0	Do.
		MUZAFFARGARH INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		<i>Chenab Canals.</i>			
Irrigation Branch Notifica- tions No. 652-R. I., dated 9th July 1903, and No. 100-R. I., dated 2nd February 1916.	I	Rice, gardens and pepper	2 12 0	1 6 0	Acre of matured crop.
	II	Cotton, sugarcane and indigo	1 8 0	0 12 0	Ditto.
	III	Other kharif crops	1 2 0	0 9 0	Ditto.
	IV	Rabi crops	0 12 0	0 6 0	Ditto.
	V	Grass lands	0 6 0	0 3 0	Ditto.
Irrigation Branch Notifica- tion No. 434-R. I., dated 4th May 1907.		Note.—The rate for grass lands to be assessed at the discretion of the Deputy Commissioner.			
		<i>Indus Canals.</i>			
	I	Rice, gardens and pepper	2 0 0	1 0 0	Acre of matured crop.
	II	Cotton, sugarcane and indigo	1 0 0	0 6 0	Ditto.
	III	Other kharif crops	0 12 0	0 6 0	Ditto.
Irrigation Branch Notifica- tion No. 484-R. I., dated 4th May 1907.	IV	Rabi crops	0 8 0	0 4 0	Ditto.
	V	Grass lands	0 4 0	0 2 0	Ditto.
		Note.—The rate for grass lands to be assessed at the discretion of the Deputy Commissioner.			
		GHAGGAR INUNDATION CANALS (BRITISH).			
		OCCUPIER'S RATE.			
Irrigation Branch notifi- cation No. 343-R. I., dated 27th November 1903.	I	Sugarcane	8 8 0	4 4 0	Acre matured per crop.
	II	Rice and water-nuts	6 0 0	3 0 0	Ditto.
	III	All other crops	2 8 0	1 4 0	Ditto.
		Proviso.—Provided that no occupier's rates shall be levied in respect of any land for the time being assessed to fluctuating land revenue.			
		DELHI AND GURGAON WORKS.			
		OCCUPIER'S RATE.			
			Rate per acre.		
			Rs. A. P.		
Irrigation Branch Notifi- cation No. 653-I., dated 6th April 1898.	...	All crops	0 6 4½		Acre.
		Grass	0 8 8½		Do.
		Note.—This schedule is the same as that pub- lished in Notification No. 6253-I., dated 8th December 1878, which is hereby superseded.			

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONCLUDED.

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Fee
			Flow.	Lift.	
		DELHI AND GURGAON WORKS - CONCLUDED. OCCUPIER'S RATE—concluded. SCHEDULE OF RATES FOR SUPPLY OF WATER FOR PURPOSES OTHER THAN IRRIGATION. WESTERN JYNA CANAL, UPPER HARI DOAR CANAL, NIGUND CANAL, LOWER CHENAB CANAL, UPPER JUTIAH CANAL, LOWER JUTIAH CANAL, UPPER CHENAB CANAL, LOWER HARI DOAR CANAL, UPPER SUTLEJ CANALS, LOWER SOHAN AND PANA CANALS, SINDHAI AND SUTLEJ CANALS, LOWER SUTLEJ AND CHENAB CANALS, JYNA CANALS, SUTLEJ- GANGA CANALS, SHARHU CANALS.	Rs. A. P.	Rs. A. P.	
Irrigation Branch Notifications Nos. 554-I, dated 16th April 1915, 570-R I, dated 16th December 1912, 560-R I, dated 22nd April 1911, 617-R I, dated 25th June 1918, and 674-R I, dated 10th September 1910.	...	Brick-making, and put wall building	...	0 2 0	100 cubic feet.
		Laying concrete and brick pavements	...	0 2 0	Ditto.
		Metalling roads	...	17 0 0	Nil.
		Water supply in fall	...	1 0 0	250 cubic feet.
				2 5 0	Cash value of 1000 feet of 1/2" diameter pipe.
				5 0 0	Cash value of 1000 feet of 1/2" diameter pipe.
Irrigation Branch Notification No. 724-B, dated 26th October 1916.	...	Water supply in fall	...	2 5 0	Cash value of 1000 feet of 1/2" diameter pipe.
Irrigation Branch Notification No. 1243-B, dated 28th September 1911.	...	Water supply in fall	...	2 5 0	Cash value of 1000 feet of 1/2" diameter pipe.
Irrigation Branch Notification No. 1243-B, dated 28th September 1911.	...	Water supply in fall	...	2 5 0	Cash value of 1000 feet of 1/2" diameter pipe.

PUNJAB PROVINCE.

IRRIGATION BRANCH.

ADMINISTRATIVE ACCOUNTS

FOR THE YEAR

1918-19.

No. Irr. 15-4—

dated _____ 1920;

Copy forwarded to

F. DUKOFF GORDON,
Accountant-General, Punjab;

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Name of Project.	ESTIMATED COST OF CONSTRUCTION.			CAPITAL OUTLAY INCLUSIVE OF INDIRECT			
	Direct charges.	Indirect charges.	Total.	During 1918-19			To end of
				Direct charges.	Indirect charges.	Total.	Direct charges.
1	2	3	4	5	6	7	8
PRODUCTIVE WORKS.							
<i>Canals in Operation.</i>	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Imperial</i>							
Western Jammu Canal	1,66,67,231	8,10,052	17,75,313	10,292	-135	10,157	1,69,91,604
Upper Bari Doab Canal	2,07,46,596	7,38,020	2,15,27,216	5,64,114	365	5,64,479	2,16,58,112
Sirhind Canal	2,42,60,621	12,12,408	2,54,79,232	57,406	68	57,474	2,44,70,625
Lower Chenab Canal	3,18,51,395	7,79,371	3,26,30,766	-22,594	239	-22,355	3,17,10,845
Upper Sutlej Inundation Canal, including Lower Sohag and Para.	16,96,078	1,01,041	17,97,019	-5,027	..	-5,027	17,11,275
Sidhnai Canal	12,47,714	40,225	12,87,939	-1,553	..	-1,553	12,90,449
Lower Jhelum Canal	1,60,95,546	4,06,698	1,65,04,244	1,36,211	16,230	4,52,450	1,62,08,881
Indus Inundation Canals	28,47,297	80,185	29,22,682	1,007	-130	982	29,01,360
Upper Chenab Canal	3,41,46,933	9,97,875	3,51,14,808	-9,154	2,117	-6,037	3,47,71,602
Lower Bari Doab Canal	2,13,16,100	1,75,387	2,17,50,703	1,75,827	5,822	1,84,649	2,21,70,812
Upper Jhelum Canal	4,30,10,774	9,12,452	4,39,23,226	-68,360	30,513	-37,847	4,40,97,621
TOTAL CANALS IN OPERATION—IMPERIAL	21,39,25,734	65,50,541	22,01,92,278	11,48,168	58,219	12,06,387	21,79,53,180
<i>Contribution</i>							(e)
Western Jammu Canal [... ..]	11,00,478	..	11,00,478	..	..	..	11,00,478
Sirhind Canal	1,43,18,817	..	1,43,18,817	1,170	..	1,170	1,13,22,486
TOTAL CANALS IN OPERATION, CONTRIBUTION	1,54,70,295	..	1,54,70,295	1,170	..	1,170	1,51,91,914

LAHORE :

The 5th September, 1919.

ACCOUNTANT-GENERAL.

PUNJAB PROVINCE.

FOR THE YEAR 1918-19.

Minor Works, the Capital outlay thereon, the Revenue derived therefrom, the working expenses, of 1918-19.

DURING 1918-19.						WORKING EXPENSES AND MAINTENANCE DURING 1918-19 INCLUSIVE OF INDIRECT CHARGES, NOS. 3 AND 5.			NET RESULTS, EXCLUDING INTEREST DIFFERENCE BETWEEN REVENUE AND WORKING EXPENSES.				Simple Interest during 1918-19.		NET RESULTS INCLUDING INTEREST.			
Collected with Land Revenue.			Total.			Direct charges.	Indirect charges.	Total.	Excess revenue (surplus).	Excess expenditure (deficit).	Rate per cent.		Simple Interest during 1918-19.	Excess revenue (surplus).	Excess expenditure (deficit).	Rate per cent.		
Actual transactions of the year.	Adjustment on account of previous year.	Total.	Actual transactions of the year.	Adjustment on account of previous year.	Total.						Of excess revenue.	Of excess expenditure.				Of excess revenue.	Of excess expenditure.	
Rs.	Rs.	Rs.	Rs.	R.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
20,618	...	20,618	62,007	...	62,097	59,404	4,540	61,010	18,087	...	8.04	...	...	...	...	...	...
...	12,277	...	12,277	10,298	1,493	20,701	...	8,514	...	2.21	...	...	...	...	...
20,618	...	20,618	94,374	...	94,374	78,762	6,030	84,501	18,087	8,514	1.57	...	...	...	...	...	...
									9,573									
...	2,859	...	2,859	...	2,859	...	.00	...	...	...	...	...
2,77,755	...	2,77,755	5,30,714	...	5,30,714	3,20,742	18,200	3,48,002	1,91,712	...	...	...	...	...	...	...	...
2,68,746	...	2,68,746	4,77,762	...	4,77,762	1,05,35	10,293	1,75,651	3,02,111	...	...	...	...	...	...	...	...
3,71,778	...	3,71,778	6,40,121	...	6,40,121	3,22,187	10,185	3,41,372	2,08,749	...	...	...	...	...	...	...	...
9,18,278	...	9,18,278	10,54,507	...	10,54,507	8,14,287	47,738	8,62,025	7,02,512	...	...	...	...	...	...	...	...
12,130	...	12,130	41,614	...	41,614	36,265	2,754	39,019	2,505	...	...	...	...	...	...	...	...
...	
12,130	...	12,130	41,614	...	41,614	36,265	2,754	39,019	2,505	...	...	...	...	...	...	...	...

F. DUKOFF GORDON.

Accountant-General, Punjab.

ADMINISTRATIVE ACCOUNTS

Western Jumna Canal

No. 2.—CAPITAL ACCOUNTS FOR

HEAD OF ACCOUNT.	DIRECT CHARGES.									Grand Total as per Statement of Capital Expenditure and Receipts for the Year ending 31st March 1927. By order of the Controller of Accounts.	
	IMPROVEMENT.			CONSTRUCTION.			TOTAL.				
	1915-16. Rs.	1916-17. Rs.	1917-18. Rs.	1915-16. Rs.	1916-17. Rs.	1917-18. Rs.	1915-16. Rs.	1916-17. Rs.	1917-18. Rs.		
1.—WORKS.											
1.—HEAD WORKS.—											
B.—Land	4,672	...	4,672	...	...	...	4,672	...	4,672		
C.—Works	4,19,440	...	4,19,440	...	...	...	4,19,440	...	4,19,440		
A.—Buildings	42,511	...	42,511	...	...	...	42,511	...	42,511		
O.—Miscellaneous	12,575	...	12,575	...	...	...	12,575	...	12,575		
P.—Maintenance	24,552	...	24,552	...	...	...	24,552	...	24,552		
TOTAL	5,01,807		5,01,807				5,01,807		5,01,807		
2.—MAIN CANAL & FEEDERS.—											
A.—Preliminary Expenses	2,175	...	2,175	...	...	...	2,175	...	2,175		
B.—Land	2,25,212	...	2,25,212	...	...	...	2,25,212	...	2,25,212		
D.—Regulators	2,24,051	...	2,24,051	...	...	...	2,24,051	...	2,24,051		
E.—Falls and Weirs	2,21,100	...	2,21,100	...	...	...	2,21,100	...	2,21,100		
F.—River and Hill Torrent Works	2,74	...	2,74	...	...	...	2,74	...	2,74		
F.—(1) — Other Drainage Works	2,27,617	...	2,27,617	...	...	...	2,27,617	...	2,27,617		
G.—Bridges	4,27,950	...	4,27,950	...	...	...	4,27,950	...	4,27,950		
H.—Fences	2,49,415	...	2,49,415	...	...	...	2,49,415	...	2,49,415		
I.—Navigation Works	17,775	...	17,775	...	...	...	17,775	...	17,775		
J.—Mills	55,115	...	55,115	...	...	...	55,115	...	55,115		
K.—Buildings	4,70,450	1,925	4,72,375	...	...	...	4,72,375	1,925	4,74,300		
L.—Earthwork	10,01,175	...	10,01,175	...	...	...	10,01,175	...	10,01,175		
M.—Plantations	10,775	...	10,775	...	...	...	10,775	...	10,775		
O.—Miscellaneous	74,000	...	74,000	...	...	...	74,000	...	74,000		
P.—Maintenance	1,75,000	...	1,75,000	...	...	...	1,75,000	...	1,75,000		
TOTAL	10,01,175	...	10,01,175	...	...	...	10,01,175	...	10,01,175		
3.—DISTRIBUTARIES.—											
A.—Preliminary Expenses	65,025	...	65,025	...	...	...	65,025	...	65,025		
B.—Land	3,10,000	...	3,10,000	...	...	...	3,10,000	...	3,10,000		
C.—Works	11,57,719	...	11,57,719	...	...	...	11,57,719	...	11,57,719		
L.—Earthwork	10,05,277	...	10,05,277	...	...	...	10,05,277	...	10,05,277		
O.—Miscellaneous	3,55,000	...	3,55,000	...	...	...	3,55,000	...	3,55,000		
P.—Maintenance	54,933	...	54,933	54,933	...	54,933		
TOTAL	31,12,695	...	31,12,695	31,12,695	...	31,12,695		

ACCOUNTANT-GENERAL,

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PUNJAB PROVINCE,

FOR THE YEAR 1918-19.

Project.

AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated (Construction Estimates closed on 31st March 1895.)	Expenditure against closed Estimates.
	IMPERIAL.			CONTRIBUTION.			TOTAL.				
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
4.—DRAINAGE AND PROTECTIVE WORKS—											
A.—Preliminary Expenses.	20,301	...	20,301	1	...	1	20,302	...	20,302		
B.—Land ...	59,225	...	59,225	...	...	...	59,225	...	59,225		
C.—Works ...	2,08,426	...	2,08,426	...	...	...	2,08,426	...	2,08,426		
L.—Earthwork ...	4,27,464	...	4,27,464	3,113	...	3,112	4,30,577	...	4,30,577		
O.—Miscellaneous ...	22,647	...	22,647	...	...	...	22,647	...	22,647		
TOTAL ...	7,58,063	...	7,58,063	3,114	...	3,113	7,41,177	...	7,41,177		
TOTAL I.—WORKS.	1,12,10,304	—3,057	1,12,07,307	9,00,640	...	9,00,640	1,21,11,004	—3,007	1,21,07,947		
Add expenditure on general works at end of 1894-05	19,24,123	...	19,24,123	...	...	...	19,24,123	...	19,24,123		
TOTAL.	1,31,34,487	—3,057	1,31,31,430	9,00,640	...	9,00,640	1,40,35,127	—3,057	1,40,32,070	1,40,32,070	1,40,32,070
II.—ESTABLISHMENT.											
5. DIRECTION (a) ...	6,09,581		6,08,613	43,545	...	43,545	6,53,126		6,52,168		
6. EXECUTIVE ...	24,01,205	—968	24,01,205	1,57,882	...	1,57,882	25,59,087	—908	25,59,087		
8. SPECIAL SURVEY.	1,31,782		1,31,782	6,066	...	6,066	1,37,848		1,37,848		
8½. SPECIAL FIELD SURVEY.	88		88	...	...	...	88		88		
LEAVE AND PENSION ALLOWANCES.	...	...	...	20,040	...	20,040	20,040	...	20,040		
TOTAL ..	31,42,656	—968	31,41,688	2,36,542	...	2,36,542	33,78,108	—968	33,78,230		
Add expenditure on general works at end of 1894-05.	1,85,590	...	1,85,590	...	...	...	1,85,590	...	1,85,590		
TOTAL ..	33,28,246	—968	33,27,278	2,36,542	...	2,36,542	35,64,798	—968	35,63,820	35,63,820	35,63,820
III.—TOOLS AND PLANT											
1. Scientific Instruments	...		...	...	...	...	...		...
2. Plant and Machinery	...		...	...	...	...	...		...
3. Tools	...		...	...	...	...	...		...
4. Navigation Plant ..	1,933		...	208	...	...	2,231		...		
5. Camp Equipage ..	...	—46	2,18,004	...	...	...	...	—46	2,41,772		
6. Live stock	...		...	...	...	...	...		...
7. Office furniture	...		...	...	...	...	...		...
8. Repair and Carriage	23,973		...	5,041	...	...	20,014		...		
12. Miscellaneous	1,92,144		...	18,422	...	...	2,10,566		...		
TOTAL ...	2,18,060	—46	2,18,004	2,766	...	2,766	2,41,818	—46	2,41,772	2,41,772	2,41,772
IV.—SUSPENSE ACCOUNT.											
14. STOCK	2,13,047	23,427	2,36,474	...	...	...	2,13,047	23,427	2,36,474		
15. STOCK PURCHASES.	—311	—4,271	—4,582	...	...	...	—311	—4,271	—4,582		
15a. STOCK SALES	35	465	500	...	...	...	35	465	500		
16. MISCELLANEOUS ADVANCES	239	3,742	3,981	...	...	...	239	3,742	3,981		
TOTAL ..	2,13,010	—23,362	2,36,373	...	...	...	2,13,010	23,363	2,36,373		
GRAND TOTAL	1,68,93,793	10,202	1,69,13,985	11,60,950	...	11,60,950	1,80,64,743	10,202	1,80,74,935	1,78,37,652	1,78,37,652
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	11,481	...	11,481	472	...	472	11,063	...	11,063	11,063	11,063
NET TOTAL	1,68,82,312	10,202	1,68,91,004	11,60,478	...	11,60,478	1,80,42,700	10,202	1,80,62,082	1,78,25,700	1,78,25,700
APPORTIONMENT.											
60.—IRRIGATION WORKS	1,68,82,312	10,202	1,69,01,004	11,60,478	...	11,60,478	1,80,42,700	10,202	1,80,62,082	1,78,25,700	1,78,25,700

(a) Share of accounts excluded under Imperial from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 3. REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

Particulars	INTERNAL			CONTRIBUTION			TOTAL		
	Previous	1918-19	Total	Previous	1918-19	Total	Previous	1918-19	Total
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Acquisition rates	...	24,000.00	...	...	...	...	...	...	...
Interest on water	...	2,050.00	...	...	...	...	...	...	...
Interest on loan	...	...	...	...	...	...	...	...	...
Revenue from water	...	...	...	...	...	...	...	...	...
Water power	...	...	...	...	...	...	...	...	...
Navigation Revenue	...	...	...	...	...	...	...	...	...
Cost of Bullocks	...	...	...	...	...	...	...	...	...
Taxes	...	...	...	...	...	...	...	...	...
Miscellaneous and other receipts	...	...	...	...	...	...	...	...	...
Total	10,000,000	25,000,000	35,000,000	...	...	...	...	...	...
Balance of the 1st Division collected in the Civil Department	1,00,00,000	2,00,00,000	3,00,00,000	...	...	...	1,00,00,000	2,00,00,000	3,00,00,000
Interest on loan payable	1,00,00,000	2,00,00,000	3,00,00,000	...	...	...	1,00,00,000	2,00,00,000	3,00,00,000
Total	1,00,00,000	2,00,00,000	3,00,00,000	...	...	...	1,00,00,000	2,00,00,000	3,00,00,000
Total Receipts	12,22,79,903	25,00,000	12,51,55,003	15,72,000	1,20,000	37,00,000	12,22,79,903	25,00,000	12,51,55,003

(d) Rs. 6,19,270 more would have been earned had not Owners' rates on certain lands irrigated resulted in favour of Revenue assignments.

IRRIGATION BRANCH.

9

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL,
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(1)—EXTENSION AND IMPROVEMENTS.									
(1)—HEAD WORKS.	4,06,190	9,982	2,16,172	14,810	825	15,741	2,21,100	10,807	2,31,913
(2)—MAIN CANAL AND BRANCHES.	11,10,660	23,358	14,33,924	2,70,605	(a) 18,854	2,89,459	16,81,336	42,193	17,23,529
(3)—DISTRIBUTARIES.	8,10,357	58,900	8,79,257	59,513	..	59,513	8,72,872	58,899	9,31,771
(4)—DRAINAGE AND PROTECTIVE WORKS.	76,088	4,566	80,654	2,610	89	2,729	78,728	4,655	83,383
TOTAL I. A. ..	25,03,297	96,786	26,00,083	3,41,744	10,768	3,52,512	23,54,944	1,16,552	24,71,496
(2)—MAINTENANCE AND REPAIRS.									
(1)—HEAD WORKS.	10,12,897	59,563	10,72,460	83,274	4,761	88,035	20,01,171	61,324	20,62,495
(2)—MAIN CANAL AND BRANCHES.	80,81,198	2,72,851	83,54,049	4,82,005	18,814	5,00,819	85,63,103	2,91,528	88,54,631
(3)—DISTRIBUTARIES.	45,00,132	1,80,594	46,80,726	1,71,219	..	1,71,219	46,77,351	1,86,684	48,64,035
(4)—DRAINAGE WORKS.	6,40,927	25,204	6,66,131	21,903	961	22,864	6,67,900	20,255	6,88,155
TOTAL I. B. ..	1,51,40,454	5,44,426	1,56,84,880	7,65,061	21,300	7,86,361	1,59,14,526	5,68,791	1,64,83,317
(3)—COMPENSATION.	1,12,276	1,370	1,13,646	2,891	93	2,984	1,14,906	1,463	1,16,369
(4)—ESTABLISHMENT.									
(5)—DIRECTION AND ACCOUNT.	22,26,163		(c) ..	99,629			23,21,732		
(6)—EXECUTIVE ESTABLISHMENT.	67,19,502	4,00,422	1,13,40,027		14,401	4,82,548	4,14,313	1,19,23,576	
(7)—MEDICAL DO.				3,69,428			90,88,930		
(7A)—REVENUE DO.	65,97,503	2,03,670	68,01,173	1,38,748		1,38,748	67,36,261	2,03,670	69,39,931
(7B)—NAVIGATION ESTABLISHMENT.	18,168	..	..	..	..	..	18,168	..	..
(7C)—PLANTATION ESTABLISHMENT.	790	..	..	..	..	..	790	..	..
(7E)—MILLS AND MACHINERY.	1,123	..	..	..	..	..	1,123	..	..
LEAVE & PENSION ALLOWANCE.	..	..	..	84,923	2,029	86,952	84,923	2,029	86,952
TOTAL ..	1,76,63,189	6,64,092	1,83,27,281	6,91,728	16,520	7,08,248	1,82,54,817	6,20,612	1,88,75,429

(a). Includes Rs. 13,182 on account of Saigniorago during the year. Up to date Rs. 2,61,375.

(b). Includes Rs. 67,401 on account of fees for collection of Revenue

(c). Share of Accounts Establishment excluded under Imperial from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

CHARGE.	EXPENDITURE.			CONTRIBUTION.			TOTAL.		
	Revenue.	1918-19.	Total.	Revenue.	1918-19.	Total.	Revenue.	1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(5) TOOLS AND PLANT									
(1) SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	5,791						5,791		
(2) PLANTS AND MACHINERY.	5,742						5,742		
(3) TOOLS	3,506						3,506		
(4) NAVIGATION PLANTS.	6,216						6,216		
(5) CANT LIGNUM.	—502	9,476	8,974				—502	9,476	8,974
(7) LIME STONE	471						471		
(7) OIL LAMP	22 6						22 6		
(12) MUCKLANT	2,55,007			23,050			2,55,007		
(13) REPAIRS AND CARriage.	2,50,947			525	112	21,601	2,50,947		
TOTAL ..	5,57,706	9,476	5,67,182	23,575	112	21,601	5,76,281	9,476	5,85,757
(6) REFUND OF REVENUE.	3,72,186	919	3,73,105	..	..	..	3,72,186	919	3,73,105
(7) PROFIT AND LOSS.	1,295	..	1,295	..	..	..	1,295	..	1,295
General work in aid of 1-61.62.	18,92,525	..	18,92,525	..	..	..	18,92,525	..	18,92,525
TOTAL ..	1,11,52,956	12,37,072	1,23,90,028	1,77,416	61,164	18,38,580	1,30,41,481	12,37,931	1,42,79,412
Indirect charges debitable to Revenue Account as per Account No. 6.	25,61,178	85,200	26,46,378	..	..	..	25,61,178	85,200	26,46,378
TOTAL CHARGES	1,40,14,162	12,42,272	1,52,56,434	18,25,416	61,164	18,86,580	1,65,96,710	12,46,131	1,78,42,841
Balance, Net Revenue.	7,82,65,539	15,33,707	7,97,99,246	—11,32,612	—30,912	—11,63,524	7,71,33,127	14,73,707	7,86,06,834
GRAND TOTAL	12,22,79,695	25,76,072	12,48,55,767	35,771	1,262	37,033	12,23,16,760	25,77,838	12,48,94,598

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
Rs.	Rs.		Rs.
To Interest charges to end of 1917-18 ..	2,40,15,873	Nat Revenue realized to end of 1917-18 ..	7,82,65,533
Do, for the year 1918-19 ..	1,63,91,601	Do, during 1918-19 ..	15,33,797
Total outlay to end of 31st March 1918 ..	9,640		
Less half outlay during 1918-19 ..	1,63,91,958		
Total ..	5,85,144		
Interest at 3-1818 per cent. ..	2,16,33,517		
Total ..	5,51,66,023		
Balance Revenue after defraying Interest charges ..			
Total ..	7,97,89,510	Total ..	7,97,89,510

No. 6.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ..	2,16,561	...	2,16,561
Leave and Pension Allowances ..	5,93,866	—135	5,93,821
{ Imperial ..	29,918	...	29,918
{ Contribution ..			
Total ..	8,89,266	—135	8,89,131
Leave and Pension Allowances debited to Native States treated as Direct charges and transferred to Account No. 2 of the Canal.	29,918	...	29,918
Not debitable to Imperial ..	8,10,217	—135	8,10,082
REVENUE—			
Capitalization of abatement of Land Revenue ..	16,702	725	17,517
Leave and Pension Allowances ..	26,44,386	84,573	29,28,959
{ Imperial ..	84,023	2,020	86,043
{ Contribution ..			
Total ..	29,40,101	87,327	30,33,428
DEBIT—			
Leave and Pension Allowances debited to Native States treated as Direct charges and transferred to Account No. 3 of this Canal.	84,023	2,020	86,043
Not debitable to Imperial Revenue ..	28,61,178	85,298	29,46,476

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES TO DATE TO 31st MARCH 1919.			ESTIMATED CHARGES.			Total Charges to Date to 31st March 1919.	REMARKS.
	Sanctioned Estimate to 31st March 1918.	Actual Charges to 31st March 1919.	Total.	Sanctioned Estimate to 31st March 1919.	Actual Charges to 31st March 1919.	Unspent Balance at 31st March 1919.		
IMPERIAL.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Direct Charges.								
Works ..	1,02,50,000	2,31,155	1,04,81,155	..	..	..	1,31,71,155	
Establishment ..	17,57,200	6,62,000	24,19,200	..	..	..	30,79,200	
To Land Revenue ..	1,77,700	10,000	1,87,700	..	..	..	2,10,000	
Supplies & Balance ..	..	..	..	25,000	..	25,000	25,000	
Total ..	1,21,84,900	2,47,755	1,24,32,655	25,000	..	25,000	1,24,32,655	
Less Receipts on Capital Account ..	11,000	..	11,000	..	..	..	11,000	
Net Total ..	1,21,73,900	2,47,755	1,24,21,655	25,000	..	25,000	1,24,21,655	
Indirect Charges.								
Capitalized interest on Loans ..	1,50,000	12,000	1,62,000	..	..	..	2,10,000	
Leave and Pension Allowances ..	2,12,000	51,400	2,63,400	..	..	..	1,20,000	
Total ..	3,62,000	63,400	4,25,400	..	..	..	3,30,000	
Grand Total ..	1,25,35,900	3,11,155	1,28,47,055	25,000	..	25,000	1,28,47,055	
CONTRIBUTION.								
Direct Charges.								
Works ..	8,51,000	1,00,000	9,51,000	..	..	..	9,51,000	
Establishment ..	2,17,000	10,000	2,27,000	..	..	..	2,27,000	
To Land Revenue ..	25,800	100	25,900	..	..	..	25,900	
Total ..	10,93,800	1,10,100	12,03,900	..	..	..	12,03,900	
Less Receipts on Capital Account ..	470	..	470	..	..	..	470	
Net Total ..	10,93,330	1,10,100	12,03,430	..	..	..	12,03,430	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Bari Doab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated Construction Estimate closed on 31st March 1890.	Expenditure against closed Estimate.
	Imperial.				
	Previous.	1918-19.	Total.		
I.—WORKS.	Rs.	Rs.	Rs.	Rs.	Rs.
1. HEAD WORKS—					
B.—Land ..	—261	..	—261		
C.—Works ...	8,23,658	..	8,23,658		
K.—Buildings ..	65,953	..	65,953		
TOTAL ..	8,80,255	...	8,80,255		
2. MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses ...	8,186	..	8,186		
B.—Land ..	1,41,785	—2,070	1,39,706		
D.—Regulator ...	3,52,030	..	3,52,030		
E.—Falls and Weirs ...	19,40,484	..	19,40,484		
F.—River and Hill Torrent Works ...	5,39,098	..	5,39,098		
F. (1) —Other Cross Drainage Works ...	1,18,245	..	1,18,245		
G.—Bridges ..	8,52,430	..	8,52,430		
H.—Escapes ...	6,38,733	..	6,38,733		
I.—Navigation Works ...	4,78,688	..	4,78,688		
J.—Mills ...	1,47,530	..	1,47,530		
K.—Buildings ..	10,81,002	10,345	10,91,347		
L.—Earthwork ..	39,00,740	..	39,00,740		
M.—Plantations ..	95,475	..	95,475		
O.—Miscellaneous ..	7,24,457	..	7,24,457		
P.—Maintenance ..	75,872	..	75,872		
TOTAL ..	1,11,07,582	8,265	1,11,15,847		
3.—DISTRIBUTARIES—					
A.—Preliminary Expenses ..	24,333	..	24,333		
B.—Land ...	3,08,015	..	3,08,015		
C.—Works ...	16,20,805	..	16,20,805		
L.—Earthwork ...	16,08,381	..	16,08,381		
O.—Miscellaneous ..	3,16,540	—733	3,15,807		
P.—Maintenance ..	8,354	..	8,354		
Add—Dinanagar Navigation Channel ..	35,776	..	35,776		
Shalpur Water Courses ..	63,427	..	63,427		
Lahore City Rajbaha ..	12,724	..	12,724		
TOTAL ..	41,67,358	—733	41,66,625		
Total carried over ..	1,01,54,105	7,533	1,01,61,728		

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1915-19.

Upper Bari Doab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1915-19—*contd.*

HEAD OF ACCOUNT.	FISCAL CHARGE.			Cost of construction in accordance with the Capital Account (Budget of 1920)	Expenditure incurred in 1920.
	Period.				
	Previous.	1915-19.	Total.		
	Rs.	P.	Rs.	P.	P.
I.—WORKS—continued.					
Brought over ..	1,61,145	7,23	1,61,21,728		
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Primary Expenses ..	500	..	500		
B.—Land ..	1,519	..	1,519		
C.—Works ..	28,916	..	28,916		
L.—Earthwork ..	12,517	..	12,517		
O.—Miscellaneous ..	110	..	110		
TOTAL ..	1,52,652	..	1,52,652		
TOTAL I.—WORKS ..	1,62,797	7,23	1,62,79,728	1,62,79,728	1,62,79,728
II.—ESTABLISHMENT.					
5. Direction ..	2,15,307	..	2,15,307		
6. Executive ..	20,12,004	2,00	20,12,004		
7. Medical ..	2,00	..	2,00		
TOTAL ..	22,27,311	2,00	22,27,311	22,27,311	22,27,311
III.—TOOLS AND PLANT.					
2. Plant and Machinery ..	15,100	..	15,100		
4. Navigation Plant ..	50	100	65,511		
5. Repaired Carriage ..	2,500	..	2,500		
Miscellaneous ..	5,10,199	..	5,10,199		
TOTAL ..	20,25,349	100	20,25,349	20,25,349	20,25,349
IV.—SUSPENSE ACCOUNT.					
14. Stock ..	4,27,445	3,57,991	8,22,176		
15. Stock Purchases ..	—4,474	10,000	—4,474		
15A. Stock Sales ..	500	—720	500		
16. Miscellaneous Advances ..	1,211	1,61,973	1,63,184		
18. London Stores ..	4,407	—4,407	—		
TOTAL ..	4,27,471	3,55,873	8,22,310		
GRAND TOTAL ..	1,11,10,889	5,54,111	2,16,55,007	2,07,55,007	2,16,55,007
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	10,925	..	10,925	10,925	10,925
Net Total ..	1,10,99,964	5,54,111	2,16,55,142	2,07,55,506	2,16,55,142
APPORTIONMENT.					
19.—Irrigation Works ..	2,10,51,323	5,54,111	2,16,55,142		

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Bari Doab Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1918-19.	Total		Previous.	1918-19.	TOTAL.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ..	10,41,49,603	37,52,367	10,70,01,970	(1)—EXTENSIONS AND IMPROVEMENTS.			
Owners' rates on irrigated land.	8,576	..	8,576	1.—HEAD WORKS ..	4,08,835	416	4,08,251
Sales of water ..	8,01,011	32,481	8,38,500	2.—MAIN CANAL AND BRANCHES ..	14,00,300	26,600	15,16,075
Supply of towns ..	3,627	66	3,693	3.—DISTRIBUTARIES ..	13,18,217	33,770	13,52,026
Receipts from Plantations.	11,13,603	37,440	11,67,263	4.—DRAINAGE AND PROTECTIVE WORKS.	1,02,352	29,007	2,22,259
Receipts from other Canal produce.	2,46,913	5,103	2,52,136	TOTAL (1) ..	34,00,743	90,793	36,00,511
Water-power ..	43,25,010	1,23,912	46,19,858	(2)—MAINTENANCE AND REPAIRS.			
Navigation Receipts ..	5,477	..	5,477	1.—HEAD WORKS ..	48,21,711	45,387	48,67,128
Rent of Buildings ..	..	8,061	8,061	2.—MAIN CANAL AND BRANCHES ..	63,14,159	2,07,552	66,12,041
Fines ..	17,51,287	1,506	21,22,232	3.—DISTRIBUTARIES ..	47,23,167	1,30,732	48,02,899
Miscellaneous and other Receipts.	..	4,61,102	4,61,102	4.—DRAINAGE WORKS ..	1,36,190	10,153	1,45,343
Total ..	11,26,10,310	41,22,310	11,70,38,651	TOTAL (2) ..	1,80,91,587	4,92,324	1,04,87,411
Share of Land Revenue collected in the Civil Department.	1,01,43,000	6,13,021	1,07,56,021	(3)—COMPENSATION.	40,510	..	40,510
Interest on sale proceeds of waste lands benefited.	8,90,531	73,561	9,64,101	(4)—ESTABLISHMENT.			
Total ..	1,70,33,061	6,87,188	1,77,20,780	5.—DIRECTION AND ACCOUNT	23,92,140 (a)		
TOTAL RECEIPTS ..	12,96,40,011	51,09,534	13,47,50,416	6.—EXECUTIVE ESTABLISHMENT	89,04,331	3,98,202	1,18,93,030
				7.—MEDICAL Do. ..	1,29,237		
				7A.—REVENUE Do. ..	73,31,122 (b)	2,25,111 (b)	75,56,236
				7C.—PLANTATION Do. ..	40,165	13,147	53,302
				7D.—LEAVE AND PENSION ALLOWANCES.	52	..	52
				TOTAL ..	1,58,57,057	6,38,463	1,94,95,320
				(5)—TOOLS AND PLANT.			
				1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	1,174		
				2.—PLANT AND MACHINERY ..	8,225		
				3.—TOOLS ..	2,213		
				4.—NAVIGATION PLANT ..	887		
				5.—CAMP EQUIPAGE ..	147	10,800	7,13,293
				6.—LIFE STOCK ..	1,517		
				7.—OFFICE FURNITURE ..	2,927		
				8.—REPAIRS AND CARRIAGE ..	3,18,042		
				9.—MISCELLANEOUS ..	3,65,062		
				TOTAL (5)—TOOLS AND PLANT.	7,93,421	10,800	7,13,293
				(6)—REFUNDS OF REVENUE.	1,76,351	3,111	1,79,192
				(7)—PROFIT AND LOSS.	1,073	..	1,073
				TOTAL ..	4,21,084	12,36,056	4,71,26,016
				Indirect charges debitable to Revenue Account as per Account No. 5.	20,40,165	89,485	30,35,750
				TOTAL CHARGES ..	4,51,40,210	13,25,420	4,61,65,666
				Balance, Net Revenue ..	8,47,09,603	37,81,114	8,92,01,799
				GRAND TOTAL ..	12,96,40,011	51,09,534	13,47,50,416

(a). Share of Accounts excluded from 1912-13 to 1917-18.

(b). Included Rs. 82,972 on account of loss for collection of revenue.

OFFICE OF ACCOUNTANT-GENERAL,
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19,
Upper Bari Doab Canal Project.
No. 1.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
Total Interest charges to end of 1917-18 ..	Rs. 2,00,015-0	Net Revenue realized to end of 1917-18 ..	Rs. 8,15,00,000
Do. " for the year 1918-19 ..		Do. " during 1918-19 ..	35,4,114
Total outlay to end of March 1919 ..	Rs. 2,10,28,142		
Less Laft outlay during 1918-19 ..	Rs. 2,82,000		
Mean Capital at charge ..	Rs. 2,13,76,000		
Interest at 3.4518 per cent. on above ..	7,11,275		
Total ..	Rs. 2,67,18,900		
Balance Revenue after defraying Interest charges ..	Rs. 8,15,14,200		
Total ..	Rs. 8,15,14,200	Total ..	Rs. 8,15,14,200

No. 2.—ACCOUNT OF INDEBTED CHARGES FOR AND TO END OF 1918-19.

	Particulars.	1918-19.	1918-19.	Total
		Rs.	Rs.	Rs.
CAPITAL—				
Capitalization of Expenditure of Land Revenue ..		2,00,000		2,00,000
Leave and Pension Allowances ..		7,17,500	35,4,114	7,52,614
Total ..		7,17,500	35,4,114	7,52,614
REVENUE—				
Capitalization of Expenditure of Land Revenue ..		2,00,000		2,00,000
Leave and Pension Allowances ..		7,17,500	35,4,114	7,52,614
Total ..		7,17,500	35,4,114	7,52,614

No. 3.—STATEMENT COMPARING CHARGES TO DATE WITH ANTICIPATED ESTIMATE.

PARTICULARS.	CHARGES AGAINST THE FUNDATIONS.			CHARGES ESTIMATED.			Total of charges to date.	REMARKS.		
	Revenue Expenditure.	Capital Expenditure.	Total.	Revenue Expenditure.	Capital Expenditure.	Total.		By date.	No. and date.	Amount.
DEBIT CHARGES.—	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			Rs.
Works ..	1,21,50,701	89,41,678	1,63,95,435	1,00,000	4,000	1,04,000	1,75,00,000	8-11-18	1918-W.I.	8,711
Establishment ..	27,91,452	6,52,722	21,51,170	..	950	950	21,51,170		8-2-19	8,711
Tools and Plant ..	4,09,215	4,09,215	8,28,430	..	2,750	2,750	8,28,430		7-21-W.I.	8,707
Suspense Balance..	..	..	..	8,79,310	..	— 8,79,310	8,79,310		4-2-18	9,107
Total ..	1,53,51,368	96,03,615	2,49,54,983	8,79,310	9,400	8,88,710	2,49,54,983			
Less Prepayment Capital Account ..	16,855	..	16,855	..	..	..	16,855			
Net Total ..	1,57,25,500	96,03,615	2,49,54,983	8,79,310	9,400	— 8,88,710	2,49,54,983			
INDUSTRY CHARGES.—										
Capitalized statement of Land Revenue ..	8,381	12,250	20,631	..	..	..	20,631			
Leave and Pension Allowance ..	6,22,375	95,254	7,17,629	..	..	..	7,17,629			
Total ..	6,30,756	1,07,504	7,38,260	..	..	..	7,38,260			
GRAND TOTAL ..	1,63,56,256	97,11,119	2,15,17,801	8,79,310	9,107	— 8,88,417	2,23,49,762			

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of Construction as now estimated (Construction Estimate closed on 31st March 1900). Expenditure against closed Estimates.
	IMPERIAL.			CONTRIBUTION.			TOTAL.			
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	
1.—WORKS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1. HEAD WORKS.—										
A.—Preliminary Expenses.	483	..	483	272	..	272	755	..	755	
B.—Land ..	7,073	..	7,073	3,974	..	3,974	11,037	..	11,037	
C.—Work ..	9,10,928	..	9,10,928	5,29,273	..	5,29,273	14,70,201	..	14,70,201	
E.—Buildings ..	77,563	1,648	79,211	43,620	927	44,547	1,21,102	2,575	1,23,707	
O.—Miscellaneous ..	73,804	..	73,804	3,535	..	3,535	77,342	..	77,342	
P.—Maintenance ..	24,104	..	24,104	13,559	..	13,559	37,063	..	37,063	
TOTAL ..	11,23,452	4,615	11,28,067	5,91,215	927	5,92,142	17,18,100	2,575	17,20,765	
2.—MAIN CANAL AND BRANCHES.										
A.—Preliminary Expense.	23,630	..	23,630	10,308	..	10,308	42,034	..	42,034	
B.—Land ...	5,57,860	—53	5,57,807	2,51,332	..	2,51,332	6,14,212	—53	6,14,159	
D.—Regulators ..	4,16,720	..	4,16,720	2,05,027	..	2,05,027	7,13,747	..	7,13,747	
F.—Falls and Weirs ...	7,74,938	..	7,74,938	3,07,909	..	3,07,909	11,72,817	..	11,72,817	
F.—(1).—Other Cross Drainage Works.	12,32,687	..	12,32,687	10,41,510	..	10,41,510	22,74,136	..	22,74,136	
G.—Bridges ..	8,16,361	3,101	8,19,462	4,80,072	..	4,80,072	13,06,038	3,161	13,09,199	
H.—Trenches ...	1,86,080	..	1,86,080	1,03,313	..	1,03,313	2,89,000	..	2,89,000	
I.—Navigation Works. ..	17,81,197	—6,521	17,74,676	3,81,340	..	3,81,340	21,16,543	—6,521	21,09,022	
J.—Mills ...	41,513	..	41,513	..	..	..	41,513	..	41,513	
K.—Buildings ..	0,60,863	278	0,61,141	3,10,315	..	3,10,315	12,61,208	278	12,61,486	
L.—Earthwork ..	48,70,093	..	48,70,093	31,61,011	..	31,61,011	80,37,707	..	80,37,707	
M.—Plantations ..	1,20,812	..	1,20,812	1,04,358	..	1,04,358	2,25,170	..	2,25,170	
N.—Tanks and Reservoirs.	1,940	..	1,940	..	..	..	1,940	..	1,940	
O.—Miscellaneous ..	87,507	..	87,507	77,387	..	77,387	1,65,284	..	1,65,284	
P.—Maintenance ..	2,27,821	..	2,27,821	2,09,075	..	2,09,075	4,36,896	..	4,36,896	
TOTAL ..	1,20,60,814	—3,135	1,20,57,679	18,44,326	..	18,44,326	1,84,99,100	—3,135	1,84,95,965	
3.—DISTRIBUTARIES.—										
A.—Preliminary Ex- pen-se.	51,004	..	51,008	30,471	..	30,471	81,379	..	81,379	
B.—Land ..	3,80,630	147	3,80,683	72,001	..	72,001	4,50,137	147	4,50,284	
C.—Works ..	14,08,001	3,170	14,11,177	7,05,007	..	7,05,007	22,03,008	3,170	22,06,184	
L.—Earthwork ..	10,07,040	410	10,08,358	0,77,792	..	0,77,792	20,35,738	410	20,36,148	
O.—Miscellaneous ..	2,05,480	..	2,05,480	17,803	..	17,803	2,73,288	..	2,73,288	
P.—Maintenance ..	..	..	..	..	..	..	..	..	..
TOTAL ..	37,64,576	3,733	37,63,606	10,92,674	..	10,92,674	50,62,556	3,733	50,66,283	
TOTAL, CHARGED OVER...	1,00,34,066	2,240	1,00,36,011	49,36,999	927	49,37,926	2,04,70,000	3,173	2,04,73,173	

OFFICE OF ACCOUNTANT-GENERAL,
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Birhind Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19—(continued).

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as may be determined by the Board of Directors of the Punjab Canal Irrigation Department.	Total of the above two items.
	IMPERIAL.			CONTRIBUTION.			TOTAL.				
	Peshawar.	Rawalpindi.	Ferozepur.	Peshawar.	Rawalpindi.	Totals.	Peshawar.	Rawalpindi.	Totals.		
I.—WORKS—(Contd.)											
Brought over ..	1,75,51,64	2,240	1,62,50,911	25,54,316	627	25,54,943	2,02,72,85	2,177	2,02,73,032	..	..
(A). DRAINAGE AND PROTECTIVE WORKS											
A.—Preliminary Expenses ..	21	..	21	17	..	17	4	..	4	..	..
B.—Land ..	27,982	..	27,982	44,77	..	44,77	1,77,715	..	1,77,715	..	..
C.—Wells ..	2,507	..	2,507	1,72	..	1,72	2,154	..	2,154	..	..
E.—Earthwork ..	5,21,372	..	5,21,372	1,21,002	..	1,21,002	2,25,001	..	2,25,001	..	..
O.—Miscellaneous ..	..	..	..	..	..	..	..	..	..	..	..
P.—Maintenance ..	2,712	..	2,712	1,427	..	1,427	1,777	..	1,777	..	..
TOTAL ..	2,07,811	..	2,07,811	47,147	..	47,147	1,07,326	..	1,07,326	..	..
TOTAL I.—WORKS ..	1,75,51,64	2,240	1,62,50,911	25,54,316	627	25,54,943	2,02,72,85	2,177	2,02,73,032	27,01,147	27,01,147
II.—ESTABLISHMENT											
5. DELECTION (3) ..	108	..	108	1,021	..	1,021	1,771	..	1,771	..	..
6. PROTECTIVE ..	..	..	..	..	..	..	..	..	..	..	..
7. MEDICAL ..	..	..	..	..	..	..	..	..	..	..	..
8. SPECIAL SERVICE ..	40,50,601	1-7	40,50,601	2,5,001	1-0	2,5,001	2,5,001	..	2,5,001	..	..
9. SPECIAL FUND ..	..	..	..	..	..	..	..	..	..	..	..
LEAVE AND PENSION ALLOWANCES ..	..	..	..	2,40,175	..	2,40,175	2,40,175	..	2,40,175	..	..
TOTAL ..	40,50,601	1-7	40,50,601	2,5,001	1-0	2,5,001	2,5,001	..	2,5,001	2,5,001	2,5,001
III.—TOOLS AND PLANT											
9. NAVIGATION PLANT ..	..	..	..	..	..	..	..	..	..	..	..
10. MILL PLANT ..	..	..	..	..	..	..	..	..	..	..	..
11. RAILWAY PLANT AND ROLLING STOCK ..	21,02,020	..	21,02,020	11,00,000	..	11,00,000	3,00,000	..	3,00,000	..	..
12. MISCELLANEOUS ..	..	..	..	..	..	..	..	..	..	..	..
13. REPAIRS AND CARREPAGE ..	2,712	..	2,712	10,000	..	10,000	1,777	..	1,777	..	..
Loss on Exchange ..	..	..	..	..	..	..	..	..	..	..	..
TOTAL ..	21,02,020	..	21,02,020	11,00,000	..	11,00,000	3,00,000	..	3,00,000	23,00,000	23,00,000
IV.—EXPENSE ACCOUNT.											
STOCK ..	2,27,404	22,12	2,49,526	..	..	..	2,27,404	22,12	2,49,526	..	..
14. STOCK PURCHASES ..	..	..	..	..	..	..	..	..	..	..	..
15. STOCK SALES ..	1,927	..	1,927	..	..	..	1,927	..	1,927	..	..
16. MISCELLANEOUS ADVANCES ..	210	2,121	2,331	..	..	..	210	2,121	2,331	..	..
17. LONDON INVOICES ..	..	..	..	..	..	..	..	..	..	..	..
18. LONDON STOCKS ..	..	..	..	..	..	..	..	..	..	..	..
TOTAL ..	2,30,210	22,12	2,52,332	..	..	..	2,30,210	22,12	2,52,332	..	..
GRAND TOTAL ..	2,45,26,737	57,196	2,45,83,933	1,43,21,237	1,177	1,43,22,414	1,97,40,476	22,197	1,97,62,673	1,57,61,767	1,57,61,767
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	1,77,518	..	1,77,518	68,698	..	68,698	1,77,518	..	1,77,518	1,77,518	1,77,518
NET TOTAL ..	2,44,10,219	57,196	2,44,67,415	1,43,21,237	1,177	1,43,22,414	1,97,40,476	22,197	1,97,62,673	1,55,84,249	1,55,84,249
APPORTIONMENT.											
49.—IRRIGATION WORK ..	2,44,10,219	57,196	2,44,67,415	1,43,21,237	1,177	1,43,22,414	1,97,40,476	22,197	1,97,62,673	..	..
43.—M.W. AND NAVIGATION ..	..	..	..	..	..	..	..	..	..	..	..
IMPERIAL.											
PROVINCIAL.											

(a). Share of accounts Establishment excluded from 1915-16 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Occupiers' rates	7,68,53,402	21,75,210	6,07,502	17,102	243	18,046	7,68,60,233	24,75,863	7,63,26,845
Sales of water	4,32,760	25,157	1,57,825	18,555	10	18,566	4,51,141	25,197	4,70,553
Supply of towns	1,484	1,21	2,501	..	..	..	1,489	1,21	2,704
Receipts from Plantations	4,00,591	37,661	2,35,676	2,38,637	10,402	2,53,039	7,30,241	53,303	7,90,634
Receipts from other Canal produce	1,67,058	2,070	1,89,028	1,03,292	..	1,03,292	2,80,351	2,070	2,91,321
Water power	20,63,662	1,92,210	21,05,271	0,30,359	57,027	0,47,120	20,93,411	1,99,250	31,82,697
Navigation Receipts	2,32,450	11,418	2,43,867	1,12,213	6,47	1,01,765	3,47,704	17,831	3,65,595
Rent of Buildings	1,24,730	5,678	1,50,412	51,575	1,795	53,173	1,76,314	7,474	1,83,588
Fines	47,214	2,325	49,377	510	..	510	47,720	2,318	49,533
Miscellaneous and other Receipts	19,04,926	77,123	1,52,019	44,810	2,037	46,917	19,53,786	79,216	19,92,966
Total	9,12,21,670	27,71,316	8,30,92,691	15,24,906	84,077	16,08,983	9,27,48,582	28,55,392	8,60,01,874
Share of Land Revenue collected in the Civil Department	3,04,029	98,460	4,02,515	..	..	..	3,04,029	98,460	4,02,515
Interest on sale-proceeds of waste land forfeited .. ..	..	..	..	..	..	..	..	..	..
TOTAL RECEIPTS	9,16,15,700	28,00,801	8,44,85,501	15,24,906	84,077	16,08,983	9,31,40,611	29,53,878	8,60,94,480

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

CHARGES	IMPERIAL.			CONTRIBUTING.			TOTAL.		
	Previous.	1918-19.	Total	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(1). EXTENSIONS AND IMPROVEMENTS.									
(1) HEAD WORKS ..	2,51,376	1,027	2,52,403	1,24,299	1,162	1,25,461	3,75,741	2,047	3,77,788
(2) MAIN CANAL AND BRANCHES ..	10,75,888	14,101	10,90,000	2,84,777	3,174,708	3,459,485	31,24,437	1,48,550	32,72,987
(3) DISTRIBUTARIES ..	7,00,267	65,324	7,65,591	14,262	..	14,262	8,14,722	65,324	8,80,046
(4) DRAINAGE AND PROTECTIVE WORKS ..	44,365	..	44,365	21,550	..	21,550	65,915	..	65,915
Total (1) ..	21,32,096	81,152	22,13,248	22,13,488	3,175,870	33,96,358	42,51,242	1,27,116	43,78,358
(2) —MAINTENANCE AND REPAIRS.									
(1) HEAD WORKS ..	7,51,154	12,562	7,63,716	4,44,477	6,970	4,51,447	12,51,701	19,531	12,71,232
(2) MAIN CANAL AND BRANCHES ..	10,70,127	2,41,067	13,11,194	22,744	1,20,071	1,42,815	74,81,701	3,67,076	78,48,777
(3) DISTRIBUTARIES ..	47,15,870	1,50,972	48,66,842	277	..	277	47,16,327	1,50,972	48,67,300
(4) DRAINAGE WORKS ..	8,23,574	6,464	8,30,038	3,77,730	3,971	3,81,701	5,01,512	10,433	5,11,945
Total (2) ..	1,07,11,213	4,11,065	1,11,22,278	27,46,238	1,21,042	28,67,280	1,42,39,420	6,78,982	1,49,18,402
(3)—COMPENSATION ..	36,351	47	36,398	18,447	1	18,448	49,798	26	49,824
(4)—ESTABLISHMENT.									
(1) DIRECTION AND ACCOUNT ..	12,17,763	..	12,17,763	2,91,901	..	2,91,901	17,09,664	..	17,09,664
(2) EXECUTIVE ESTABLISHMENT ..	51,50,968	..	51,50,968	10,60,812	..	10,60,812	71,20,880	..	71,20,880
(3) MEDICAL Do. ..	1,50,947	6,58,300	8,09,247	80,922	..	80,922	2,49,869	..	2,49,869
(4) REVENUE Do. (B) ..	57,72,460	..	57,72,460	12,66,111	1,07,463	13,73,574	87,53,144	6,90,908	94,44,052
(5) NAVIGATION Do. ..	21,345	..	21,345	..	..	..	21,345	..	21,345
(6) PAY AND PENSION ALLOWANCE (1/4 PER CENT ON Rs. 1,00,70,000)	..	..	..	3,40,255	15,017	3,55,272	3,40,255	..	3,40,255
Total ..	1,22,01,632	6,66,307	1,28,67,939	27,85,811	1,22,480	29,08,291	1,51,27,899	6,97,908	1,58,25,807
TOTAL CARRIED OVER ..	2,52,46,002	10,91,257	2,63,37,259	50,12,061	3,39,476	53,51,537	3,37,17,161	14,26,062	3,51,43,223

(a) Includes seven pages amounting to Rs. 70,635 during the year.

(b) Includes Rs. 8,248 on account of fees for collection of Revenue.

(c) Share of account of establishment under Imperial rule included from 1914-15 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	R.	Rs.	Rs.	Rs.	Rs.	Rs.
Total brought over ..	25,47,002	10,01,227	26,23,229	85,42,082	3,29,474	86,72,437	4,37,87,064	14,20,702	3,52,08,726
(2).—TOOLS AND PLANT.									
(1).—SCIENTIFIC INSTRUMENTS AND DIAGNO MATERIALS.	6,820			945			7,765		
(2).—PLANT AND MACHINERY ..	10,177			2,051			12,228		
(3).—TOOLS ..	11,710			2,701			14,411		
(4).—NAVIGATION ..	7,034			3,231			10,269		
(5).—CAMP EQUIPAGE ..	14,113	9,000	5,27,304	8,873	6,274	2,00,656	23,016	16,343	7,33,860
(6).—LITE STOCK ..	..	..	..	..	..	..	..	..	..
(7).—OFFICE FURNITURE ..	3,014			1,423			4,436		
(8).—REPAIRS AND CARRIAGE ..	1,74,823			03,277			2,12,800		
MISCELLANEOUS ..	2,00,510			1,12,781			4,03,291		
TOTAL ..	5,18,235	0,000	5,27,304	2,03,232	6,274	2,00,556	7,18,517	16,343	7,33,860
(6).—REFUNDS OF REVENUE ..	80,841	2,042	82,620	6,779	80	6,800	87,323	2,118	89,438
(7).—PROFIT AND LOSS ..	372	..	..	87	..	87	467	..	467
(8).—SUSPENSE ACCOUNT ..	..	..	..	..	..	..	..	..	..
MISCELLANEOUS ADVANCES ..	..	..	..	3,040	—202	2,754	3,040	—202	2,754
STOCK ..	..	..	..	17,168	1,272	18,440	17,168	1,272	18,440
STOCK SALES ..	..	..	..	177	—177	..	177	—177	..
STOCK PURCHASES ..	..	..	..	..	..	..	..	..	..
TOTAL SUSPENSE ACCOUNT ..	..	..	..	20,391	803	21,194	20,391	803	21,194
TOTAL ..	2,58,44,183	11,02,441	2,60,46,594	87,70,399	3,36,882	91,07,081	1,46,14,662	14,23,078	1,60,38,630
Indirect Charges debitable to Revenue Account No. 3.	17,35,535	81,512	18,20,347	..	..	..	17,08,835	81,512	18,20,347
TOTAL CHARGES ..	2,76,82,988	11,83,953	2,87,06,011	87,70,490	3,38,592	91,07,081	1,63,23,487	15,20,536	1,78,74,022
BALANCE NET REVENUE ..	5,49,32,717	10,86,848	5,57,18,065	72,45,693	2,42,603	74,88,296	4,77,57,121	14,33,343	4,82,20,167
GRAND TOTAL ..	8,16,15,705	28,69,801	8,41,86,006	16,24,000	64,077	16,08,063	31,10,811	29,53,878	8,60,91,681

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Am. out.		Amount.
	Rs.		Rs.
Total interest charges to end of 1917-18 ..	3,47,957.6	Net Revenue realized to end of 1918-19 ..	5,30,727.17
Do. for the year 1918-19 ..	..	Do. during 1917-18 ..	17,18,548
Rs.			
Total outlay to end of March 1919 ..	2,11,77,025		
Less half outlay during 1918-19 ..	28,708		
More Capital at charge ..	2,14,65,315		
Interest at 3.4914 per cent. ..	8,21,288		
Total ..	3,22,871		
Balance Revenue after defraying Interest charge ..	3,00,582.79		
Total ..	6,23,744	Total ..	8,27,615.75

No. 5.—ACCOUNT OF INTEREST CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ..	3,20,692	..	3,20,692
Leave and Pension Allowances ..	5,52,022	25	5,52,130
Contribution ..	2,40,125	25	2,40,150
Total ..	17,82,844	50	17,82,894
Debit Leave and Pension allowances debited to Native States treated as direct charges and transferred to Account No. 2 of the canal.	3,40,125	25	3,40,150
Net debit to Imperial Canal ..	12,12,497	60	12,12,557
REVENUE—			
Capitalization of abatement of Land Revenue ..	8,223	1,025	10,173
Leave and Pension Allowances ..	17,00,612	70,502	17,71,114
Contribution ..	3,10,288	15,045	3,25,333
Total ..	20,79,223	81,572	21,60,795
Debit Leave and Pension allowances debited to Native States treated as direct charges and transferred to Account No. 3 of the canal.	3,40,368	15,045	3,55,413
Net Imperial Revenue ..	17,79,855	81,612	18,61,467

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 6. STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REVENUES.		
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total	Charges to date	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		Amto. City.	No. & date.	Amount.
IMPERIAL.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Secy. I. B.	062 W.I.	Rs.
DIRECT CHARGES—									18 5-17	8,534
Works ..	1,56,33.67	18,85,022	1,76,22,595	7,620	71,642	64,016	1,76,30,221		0701 W.I.	5,456
Establishment ..	42,71,854	3,90,095	16,81,949	—1,250	9,331	10,614	46,00,669		25-7-17	
Tools and Plant ..	21,82,951	26,321	21,06,175	210	650	431	21,08,394		704 W.I.	
Suspense Balances	..	..	..	2,84,859	..	—2,84,859	2,84,859	G I	4-3 18 004 I	3,558
									8-11-17	00,044
Total ..	2,10,58,831	23,01,338	2,42,02,710	2,01,424	81,623	—2,00,801	2,45,84,143	Secy. I. B.	1826 W.I.	3,937
									25-4-18	
Less Receipts on Capital Account.	1,07,518	..	1,07,518	..	..	..	1,07,518		Total	51,823
Net Total ..	2,18,50,313	23,01,338	2,41,85,201	2,01,424	81,623	—2,00,801	2,44,76,025			
INDIRECT CHARGES—										
Capitalized abatement of Land Revenue.	3,15,279	4,820	3,20,099	..	..	..	3,20,090			
Leave and Pension Allowances	8,37,501	64 015	8,02,309	—170	..	179	8,02,130			
Total ..	11,52,973	50,135	12,12,408	—170	..	179	12,12,229			
GRAND TOTAL ..	2,30,33,836	23,63,773	2,53,07,609	2,01,246	81,623	—2,00,622	2,50,88,654			
CONTRIBUTION.										
DIRECT CHARGES—										
Works ...	93,00,025	4,48,181	98,17,206	913	..	—943	98,18,149			
Establishment ...	32,60,001	1,01,867	33,08,401	3,477	..	—3,477	33,71,938			
Tools and Plant ..	11,05,920	6,778	12,01,768	—229	..	220	12,01,538			
Suspense Balances	..	..	..	..	..	..	..
Total ..	1,38,31,000	5,56,816	1,43,87,432	4,200	..	—4,200	1,43,91,032			
Less Receipts on Capital Account.	98,008	..	98,008	..	..	..	98,008			
Net Total ..	1,37,03,001	5,56,816	1,43,18,817	4,200	..	—4,200	1,43,23,017			
GRAND TOTAL ..	3,67,06,837	20,10,580	3,07,10,426	2,05,446	81,623	—2,13,822	3,00,11,871			

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Chenab Canal Project

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as a result of Government Expenditure incurred on 31st March 1919.	Expenditure incurred on 31st March 1919.
	Inward				
	Previous.	1918-19.	Total		
	Rs.	Rs.	Rs.		
I.—WORKS.					
I.—HEAD WORKS.—					
A.—Preliminary Expenses	5 510	..	2 740		
B.—Land	64,105	..	64,105		
C.—Works	64,70 215	271	64 70 486		
E.—Buildings	17 501	..	17 501		
G.—Miscellaneous	60 1	..	60 1		
F.—Maintenance	1,65 734	..	1,65 734		
TOTAL	24 15 767	271	24 16 038		
2.—MAIN CANAL AND BRANCHES.—					
A.—Preliminary expenses	1,27 305	..	1,27 305		
B.—Land	1,13 812	— 2 435	1,10 377		
D.—Regulators	11,10 850	..	11,10 850		
E.—Falls and Weirs	5,18 244	..	5,18 244		
F. (1).—Other Class Drainage Works	5,87 002	..	5,87 002		
G.—Bridges	10,7 507	..	10,7 507		
H.—Escapes	5,40 212	..	5,40 212		
J.—Mills	25 000	..	25 000		
K.—Buildings	17,10 624	4,632	17,15 256		
L.—Earthwork	75 10 000	2,975	75 12 975		
M.—Plantations	1,32 731	..	1,32 731		
O.—Miscellaneous	2,97 377	..	2,97 377		
P.—Maintenance	1,05 147	..	1,05 147		
TOTAL	1,42 37 500	4,675	1,42 38 175		
3.—DISTRIBUTION.—					
A.—Preliminary Expenses	1,38 556	..	1,38 556		
B.—Land	1,24 784	..	1,24 784		
C.—Works	15,81 212	..	15 81 212		
L.—Earthwork	27,25 598	..	27,25 598		
O.—Miscellaneous	6,01 227	1,231	6,02 458		
P.—Maintenance	21 570	..	21 570		
TOTAL	64,15 007	1,231	64,16 238		

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Chenab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1900).	Expenditure against closed Estimate.
	Imperial.				
	Previous.	1918-19.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
4.—DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses	19,771		19,771		
B.—Land	24,602		24,602		
C.—Works	47,446		47,446		
L.—Earthwork	1,78,736		1,78,736		
O.—Miscellaneous	37,559		37,559		
P.—Maintenance	1,162		1,162		
TOTAL	3,09,267		3,09,267		
TOTAL I.—WORKS	2,88,68,602	5,577	2,88,72,179	3,61,94,721	2,54,57,872
II. ESTABLISHMENT.					
5. DICTION	(a) 12,46,328	1,708	(a) 48,37,469		
6. EXECUTIVE	35,27,201				
7. MEDICAL	62,178				
8. SPECIAL SURVEY .. ..	..			
8½. SPECIAL FIELD SURVEY .. ..	..			
LEAVE AND PENSION ALLOWANCES .. ..	..			
TOTAL	48,35,761	1,708	48,37,469	48,37,469	48,37,469
III. TOOLS AND PLANT.					
9. NAVIGATION PLANT .. ..	..	..	..
10. MILL PLANT .. ..	..	..	..
11. RAILWAY PLANT AND ROLLING STOCK	18,000	..	18,000		
12. MISCELLANEOUS	5,23,737	57	5,23,794		
13. REPAIRS AND CARRIAGE	1,02,328	..	1,02,328		
LOSS BY EXCHANGE .. ..	..	..	..
TOTAL	6,41,065	57	6,41,122	7,17,310	6,41,122
IV. SUSPENSE ACCOUNT.					
14. STOCK	3,97,400	—22,595	3,74,811		
15. " PURCHASES	—2,078	—13,908	—16,670		
15 (a) " SALES	718	8,782	6,507		
16. MISCELLANEOUS ADVANCES	15,122	868	16,091		
17. LONDON INVOICES .. ..	..	..	..
18. " STORES .. ..	..	..	..
TOTAL	4,10,600	—24,936	3,85,664		
GRAND TOTAL	3,17,64,997	—22,594	3,17,31,405	3,18,65,983	3,09,36,164
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.					
	14,558	..	14,558	14,558	14,558
NET TOTAL	3,17,30,439	—22,594	3,17,16,845	3,18,51,395	3,09,21,606
APPORTIONMENT.					
49.—IRRIGATION WORKS	3,17,25,029	—22,594	3,17,02,435		
48.—M. W. AND NAVIGATION, IMPERIAL	14,410	..	14,410		

(a). Excludes Public Accounts Establishment commencing from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Chouh Canal Project

No. 3. REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	ORIGINAL.			CHARGES.	BUDGET.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	(B) EXTENSIONS AND IMPROVEMENTS.	Rs.	Rs.	Rs.
Occupancy rates ...	14,00,28,222	14,37,118	14,39,65,370	1.—HEAD WORKS ...	17,32,500	17,320	17,31,820
Owners' rates on irrigated land.	18,13,220	...	21,13,220	2.—MAIN CANAL AND BRANCHES ...	13,31,400	43,310	13,34,710
				3.—DISTRIBUTORIES ...	10,27,800	20,270	10,28,070
				4.—DRAINAGE AND PROTECTIVE WORKS ...	1,91,740	20,140	2,11,880
				TOTAL (B) ...	42,83,540	1,00,070	43,83,610
Sales of water ...	1,11,710	22,630	2,37,940	(C)—DISTRICTION AND DISTRICTS.			
				1.—HEAD WORKS ...	27,33,230	1,00,070	28,33,300
Supply of levers ...	21,170	2,210	23,380	2.—MAIN CANAL AND BRANCHES ...	94,10,120	4,27,220	98,37,340
				3.—DISTRIBUTORIES ...	10,12,120	2,00,000	12,12,120
Receipts from Plantations.	2,04,610	20,470	2,25,080	4.—DRAINAGE & PROTECTIVE WORKS ...	1,85,120	20,220	2,05,340
				TOTAL (C) ...	49,30,490	6,47,510	55,78,000
Receipts from other Canal produce.	22,220	1,110	23,330	(D)—CONSTRUCTION.	1,10,000	70	1,10,070
				(E)—MAINTENANCE.			
Water power ...	1,12,700	10,000	2,12,700	1.—HEAD WORKS AND APPURTENANCES ...	1,12,700	70	1,12,770
				2.—MAIN CANAL AND BRANCHES ...	77,00,000	70	77,00,070
Navigation ...	...	210	210	3.—DISTRIBUTORIES ...	1,12,700	70	1,12,770
				4.—DRAINAGE AND PROTECTIVE WORKS ...	1,12,700	70	1,12,770
				TOTAL (D) ...	1,12,700	70	1,12,770
Rent of Buildings ...	2,31,770	12,700	2,44,470	(F)—TOOLS AND PLANT.			
				1.—HEAD WORKS AND APPURTENANCES ...	2,31,770		2,31,770
Fines ...	22,700	1,700	24,400	2.—MAIN CANAL AND BRANCHES ...	22,700		22,700
				3.—DISTRIBUTORIES ...	22,700		22,700
Miscellaneous and other Receipts.	6,68,800	18,700	6,87,500	4.—DRAINAGE AND PROTECTIVE WORKS ...	22,700		22,700
				5.—OFFICE EXPENSES ...	22,700		22,700
TOTAL ...	14,74,00,000	82,41,000	15,56,41,000	6.—REPAIRS AND MAINTENANCE ...	22,700		22,700
				7.—RAILWAY ...	22,700		22,700
				8.—RAILWAY ...	22,700		22,700
				9.—RAILWAY ...	22,700		22,700
				10.—RAILWAY ...	22,700		22,700
				11.—RAILWAY ...	22,700		22,700
				TOTAL ...	1,10,000	10,000	1,20,000
Share of Land Revenue collected in the Civil Department	1,19,00,120	67,47,000	1,86,47,120	(G)—REFUND OF REVENUE	1,19,000	67,470	1,86,470
				TOTAL ...	1,19,000	67,470	1,86,470
Interest on sale proceeds of waste lands benefited	78,33,000	9,22,000	87,55,000	Indirect charges attributable to Revenue Department—Account No. 6.	28,00,000	1,00,000	29,00,000
Total ...	5,05,12,200	78,50,180	5,83,62,380	Total Charges ...	43,83,610	23,70,000	67,53,610
				Balance Net Revenue ...	1,19,000	1,45,000	2,64,000
TOTAL RECEIPTS ...	20,73,00,700	1,66,24,860	22,39,25,560	GRAND TOTAL ...	45,02,610	25,15,000	70,17,610

(a). Balance Sheet of Accounts Establishment commencing from 1917-18 to 1917-18.
(b). Income Tax 2, 1/2% (continued) Land Revenue for collection of Revenue.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Chenab Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1917-18 ..	2,48,06,142	Net Revenue realized to end of 1917-18 ..	10,36,48,325
Do. for the year 1918-19 ..		Do. during 1918-19 ..	1,42,40,271
Total outlay to end of 31-3 1919=Rs 3,17,10,646			
Less half the outlay during 1918-19 " -11,297			
Mean Capital at charge " 3,17,28,142			
Interest at 4.818 per cent. " ..	11,04,710		
Total ..	2,59,10,652		
Balance Revenue after defraying interest charges...	15,10,86,744		
Total ..	17,78,87,606	Total ..	17,78,87,606

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

PARTICULARS.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ..	1,02,344	...	1,02,344
Leave and Pension Allowances ..	6,70,388	230	6,77,127
Total ..	7,70,132	230	7,70,371
REVENUE—			
Capitalization of abatement of Land Revenue ..	3,875	183	4,023
Leave and Pension Allowances ..	26,00,005	1,61,660	27,61,674
Total ..	26,03,880	1,61,843	27,65,009

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against sanction on Estimate.	Expenditure against open canal sanction.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ...	1,80,23,002	55,34,371	2,35,57,373	4,14,006	7,47,148	3,22,642	2,69,72,179	G. I. 530 I 5.4.13 524 I = 1,76,752
Establishment ..	30,40,006	11,07,403	41,47,409	...	1,10,453	1,16,453	49,37,460	" 16-3-14 009 I = 1,72,701
Tools and Plant ..	5,02,825	48,297	5,51,122	...	70,188	70,188	5,41,122	" 6-4-14 1226 I = 2,25,338
Expense Balances ..	..	..	..	2,80,633	..	-3,80,633	3,80,633	" 25-8-14 85 I = 1,48,007
Total ..	2,41,50,092	67,80,071	3,09,36,163	7,95,233	8,29,789	1,34,650	2,17,31,403	" 10-1-15 01378 W L L. G. 10-9-15 3277 = 11,105
Less Receipts on Capital Account	14,403	155	14,558	..	..	..	14,558	" 3-12-17 8281 = 6,380
Net Total ..	2,41,41,690	67,79,916	3,09,21,006	7,95,233	8,29,789	1,34,650	2,17,16,845	" 8-12-17 3263 = 17,076
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue	92,060	10,185	1,02,244	..	..	..	1,02,344	" 8-12-17 32,5 = 22,471
Leave and Pension Allowances	6,09,400	1,67,637	6,77,127	..	..	..	6,77,127	" 8-12-17 3102 = 10,638
Total ..	6,01,540	1,77,822	7,79,371	..	..	..	7,79,371	" 3-12-17 = 17,810
GRAND TOTAL	2,47,43,230	69,57,738	3,17,00,977	7,95,233	8,29,789	1,34,650	2,24,91,210	" 3-12-17 = 12,214

OFFICE OF ACCOUNTANT GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Sutlej Inundation Canals Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES			Cost of construction as now estimated (Construction estimate closed on 31st March 1920.)	Expenditure against closed estimate.
	IMPERIAL.				
	Previous.	1918-19.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
I.—WORKS.					
2.—Main Canal and Branches—					
A.—Preliminary Expenses	1 549	..	3 549		
B.—Land	43,544	..	43,544		
D.—Regulators	30,812	..	30,812		
E.—Falls and Weirs	62,013	..	62,013		
G.—Roads	22,492	..	22,492		
K.—Buildings	2,20,883	..	2,20,883		
L.—Earthwork	6,82,455	..	6,82,455		
O.—Miscellaneous	5,112	..	5,112		
P.—Maintenance	2,457	..	2,457		
TOTAL	9,50,723	..	9,50,723	..	..
3.—DISBURSABLES—					
A.—Preliminary Expenses	1,512	..	2,512		
B.—Land	41,762	..	41,762		
C.—Works	52,957	..	52,957		
L.—Earthwork	2,50,364	..	2,50,364		
O.—Miscellaneous	22,541	..	22,541		
P.—Maintenance	4,639	..	4,639		
TOTAL	3,27,615	..	3,27,615	..	..
TOTAL I.—WORKS	12,78,338	..	12,78,338	12,78,338	12,78,338
II.—ESTABLISHMENT.					
4.—Direction (a)	24,000	..	24,000		
5.—Executive	2,27,376	..	2,27,376		
7.—Medical	2,673	..	2,673		
TOTAL	2,54,049	..	2,54,049	2,54,049	2,54,049
III.—TOOLS AND PLANT.					
12.—Miscellaneous	24,873	..	24,873		
13.—Repairs and Carriage	114	..	114		
TOTAL	25,087	..	25,087	25,087	25,087
IV.—SUPPLIER ACCOUNT.					
14.—Stock	20,100	—5,027	15,073		
14(a).—Stock Purchases	—1	—10	—11		
15.—Stock Sales	67	—83	—16		
16.—Miscellaneous Advances	43	352	395		
TOTAL	20,204	—5,027	15,177	..	..
GRAND TOTAL	17,16,458	—5,027	17,11,431	16,06,134	16,06,134
V.—Less RECEIPTS ON CAPITAL ACCOUNT.					
NET TOTAL	17,16,302	—5,027	17,11,276	16,05,978	16,05,978
APPORTIONMENT.					
42.—IRRIGATION WORKS	9,26,373	—5,027	9,21,346		
43.—M. W. AND NAVIGATION—PROVINCIAL	7,89,907	..	7,89,907		

(a). Share of Accounts Establishment excluded from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Sutlej Inundation Canals Project.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ..	92,77,672	6,41,047	98,19,610	(1) EXTENSIONS AND IMPROVEMENTS,			
Owners' rates on irrigated land.	17,732	...	17,732	(2)—MAIN CANAL AND BRANCHES.	4,32,073	4,071	3,37,544
Salaries of water ..	3,177	82	3,259	(3)—DISTRIBUTARIES ..	1,88,420	5,676	1,04,101
				(4)—DRAINAGE AND PROTECTIVE WORKS.	1,168	..	1,168
				TOTAL (1) ..	6,22,257	10,640	6,32,903
Receipts from Plantations	1,33,167	2,223	1,35,390	(2)—MAINTENANCE AND REPAIRS.			
Receipts from other Canal Produce.	70,819	417	70,030	(1)—HEAD WORKS ..	10,370	..	10,379
Rent of Buildings ..	8,272	1,400	9,602	(2)—MAIN CANAL AND BRANCHES.	51,48,073	1,48,080	52,03,103
Fines ..	2,26,466	205	2,26,671	(3)—DISTRIBUTARIES ..	9,58,577	18,003	9,77,180
Minor Licences and other Receipts.	30,630	6,473	46,108	TOTAL (2) ..	61,17,020	1,63,033	61,80,052
				(3)—COMPENSATION..	8,693	..	8,693
Contribution ..	22,830	...	22,830	(4)—ESTABLISHMENT.			
				(5)—DIRECTION AND ACCOUNT.	(a) 7,20,718		
				(6)—EXECUTIVE ESTABLISHMENT.	23,60,371	1,18,916	24,42,151
				(7)—MEDICAL ESTABLISHMENT.	42,150		
				7 (A).—REVENUE ESTABLISHMENT.	14,35,550	63,056	14,98,617
				TOTAL ..	45,54,824	1,81,974	47,10,748
				(5)—TOOLS & PLANT.			
				(1)—SCIENTIFIC INSTRUMENTS.	723		
				(2)—PLANTS AND MACHINERY.	..		
				(3)—TOOLS ..	1,057		
				(4)—NAVIGATION PLANT.	916	3,240	20,607
				(5)—CAMP EQUIPMENT ..	177		
				(6)—LIVE STOCK ..	..	..
				(7)—OFFICE FURNITURE.	998		
				(8)—REPAIRS AND CARE	27,041		
				MISCELLANEOUS ..	40,208		
				TOTAL ..	77,361	3,240	80,607
				(9)—REFUNDS OF REVENUE.	25,806	177	25,983
				7.—PROFIT AND LOSS	370	..	370
				TOTAL ..	1,14,10,381	3,59,070	1,17,70,027
				Indirect Charges debitable to Revenue Account as per Account No. 8.	7,00,175	10,898	7,26,073
				TOTAL CHARGES ..	1,21,19,020	3,70,674	1,24,96,160
				Balance, Net Revenue ..	57,31,274	4,64,512	61,95,786
				GRAND TOTAL ..	1,78,50,800	8,41,086	1,86,91,886
TOTAL RECEIPTS ..	1,78,50,800	8,41,086	1,86,91,886				

(a) Share of Accounts Establishment excluded from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Sutlej Inundation Canals Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charged to end of 1917-18 ..	22,82,518	Net Revenue realized to end of 1917-18 ..	22,82,518
Do. for the year 1918-19 ..		during 1918-19 ..	4,11,712
Total outlay to 31st March 1919 ..	17,11,358		
Less half outlay during 1918-19 ..	—2,714		
Mean Capital at charge ..	17,12,572		
Interest at Rs. 2 1/2 per cent. ..	42,789		
Total interest charges ..	22,42,844		
Balance Revenue after defraying interest charges ..	74,32,211		
Total ..	96,75,756	Total ..	96,75,756

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

PARTICULARS	From 1917-18	1918-19	TOTAL
CAPITAL—			
Capitalization of abatement of Land Revenue ..	Rs. 24,633	Rs. ..	Rs. 24,633
Leave and Pension Allowances ..	42,715	..	42,715
Total ..	1,01,041	..	1,01,041
REVENUE—			
Capitalization of abatement of Land Revenue ..	12,479	24,633	12,479
Leave and Pension Allowances ..	6,5,702	1,01,041	7,12,573
Total ..	7,00,176	1,01,041	7,12,573

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES TO DATE TO END OF 1918-19.			CURRENT ESTIMATE.			Total charges to date against old and current estimates.	REMARKS.
	Expenditure Capitalized. Estimate.	Expenditure against current estimate.	Total	Charges to date.	Amount of sanctioned Estimate.	Unexpended Balance. Estimate.		
DIRECT CHARGES—	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Works ..	10,07,761	3,69,174	13,76,935	..	..	..	13,76,935	
Establishment ..	2,24,562	70,452	2,95,014	..	..	..	2,95,014	
Tools and Plant ..	20,018	4,510	24,528	..	..	..	24,528	
Expense Balance ..	..	..	..	12,577	..	—12,577	12,577	
Total ..	12,52,341	4,44,136	16,96,477	12,577	..	—12,577	17,11,411	
Less Receipts on Capital Account ..	185	..	185	..	..	..	185	
Net Total ..	12,52,156	4,44,136	16,96,292	12,577	..	—12,577	17,11,298	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue ..	83,651	4,352	88,003	..	..	..	88,003	
Leave and Pension Allowances ..	33,118	9,800	42,918	..	..	..	42,918	
Total ..	87,679	14,152	1,01,831	..	..	..	1,01,831	
GRAND TOTAL ..	12,52,835	4,58,288	17,07,019	12,577	..	—12,577	18,12,290	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Siddhni Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1892.)	Expenditure against closed Estimates.
	Internal.				
	Previous.	1894-95.	Total.		
I.—WORKS.					
1. HEAD WORKS—	Rs.	Rs.	Rs.		
A.—Preliminary Expenses	754	..	754		
B.—Land	235	..	235		
C.—Works	2,46,280	..	2,46,280		
K.—Buildings	11,646	..	11,646		
O.—Miscellaneous .. ..	..	..	291		
Total ..	2,59,286	..	2,59,286		
2. MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	4,014	..	4,014		
B.—Land	22,422	..	22,422		
D.—Regulators	49,568	..	49,568		
G.—Bridges	44,080	..	44,080		
K.—Buildings	60,780	..	60,780		
L.—Earthwork	2,58,908	..	2,58,908		
M.—Plantations	621	..	621		
O.—Miscellaneous	427	..	427		
P.—Maintenance	5,394	..	5,394		
TOTAL ..	4,07,411	..	4,07,411		
DISTRIBUTARIES—					
A.—Preliminary Expenses	2,905	..	2,905		
B.—Land	11,387	..	11,387		
C.—Works	66,823	..	66,823		
L.—Earthwork	1,26,784	..	1,26,784		
O.—Miscellaneous	105	..	105		
TOTAL ..	2,18,005	..	2,18,005		

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sikhna Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19

HEAD OF ACCOUNT	DIRECT CHARGES			Cost of construction as now estimated (Contractor's Estimate for 1919-20, March, 1923).	Expenditure against closed Estimate.
	Imperial.				
	Previous.	1918-19	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses ..	20	..	20		
Total ..	20	..	20		
TOTAL I—WORKS	2,41,522	..	2,41,522	2,41,522	2,41,522
II—ESTABLISHMENT.					
6. DEPUTY ..	(2) 40,500	..	(2) 40,500		
7. DIRECTORS ..	2,14,721	..	2,14,721		
8. MEDICAL ..					
Total ..	2,14,721	..	2,14,721	2,14,721	2,14,721
III—TOOLS AND PLANT.					
12. FURNITURE ..	1,000	..	1,000		
13. REPAIR AND CONSUMABLES ..					
Total ..	1,000	..	1,000	1,000	1,000
IV—EXPENSE ACCOUNT.					
14. STOCK PURCHASES ..	—500	—147	—647		
15. STOCK SALES ..	500	—420	80		
16. MISCELLANEOUS ADVANCES ..	1,120	—500	620		
17. STOCK ..	47,100	—50	47,050		
Total ..	47,100	—1,057	46,043		
GRAND TOTAL	12,42,722	—1,733	12,40,989	12,40,989	12,40,989
V—LESS RECEIPTS ON CAPITAL ACCOUNT.	224	..	224	224	224
NET TOTAL	12,42,498	—1,733	12,40,765	12,40,765	12,40,765
APPORTIONMENT.					
40.—IRRIGATION WORKS ..	12,73,000	—1,553	12,71,447		
42.—M. W. AND NAVIGATION ..	18,500	..	18,500		
INTERNAL					
PROVINCIAL					

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Siddhni Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	1.—EXTENSIONS AND IMPROVEMENTS.	Rs.	Rs.	Rs.
Occupiers' rates ..	1,00,26,029	6,06,634	1,06,31,073	1.—HEAD WORKS ..	32,267	1,881	33,848
Owners' rates ..	..	46	46	2.—MAIN CANAL AND BRANCHES.	1,77,991	1,729	1,76,770
Sales of water ..	45,681	514	45,895	1.—DISTRIBUTARIES ..	86,117	5,473	91,600
				4.—DRAINAGE AND PROTECTIVE WORKS.	508	..	508
				TOTAL 1. ..	2,96,883	8,833	3,07,716
Receipts from Plantations	6,535	1,624	8,161	2.—MAINTENANCE AND REPAIRS.			
				1.—HEAD WORKS ..	3,51,620	7,947	2,52,567
Receipts from other Canal produce.	9,512	250	9,762	2.—MAIN CANAL AND BRANCHES.	9,82,393	20,233	9,82,620
				3.—DISTRIBUTARIES ..	5,42,487	12,255	5,54,712
				TOTAL B. ..	18,86,470	40,435	18,91,905
Rent of Buildings ..	19,170	228	19,437	3.—COMPENSATION. ..	231	..	231
				4.—ESTABLISHMENT.			
Fines ..	8,421	441	8,862	5.—GENERAL ESTABLISHMENT INCLUDING DIRECTION AND ACCOUNT.	(a) 1,54,944		
					8,83,771	26,147	10,05,335
Miscellaneous and other Receipts.	16,311	1,835	17,897	6.—REVENUE ESTABLISHMENT.	20,473	(a)	
					6,72,742	14,232	6,86,974
				TOTAL ..	17,11,030	40,379	17,52,300
Total ..	1,01,31,075	8,09,556	1,07,40,633	5.—TOOLS AND PLANT			
				1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	1,446		
				2.—PLANT AND MACHINERY	201		
				3.—TOOLS ..	378		
				4.—NAVIGATION PLANT ..	1,683		
Share of Land Revenue collected in the Civil Department.	18,65,127	1,78,471	20,43,608	5.—CANAL EQUIPAGE ..	264	488	60,056
				6.—LIVE STOCK ..	..	
				7.—OFFICE FURNITURE ..	917		
				8.—REPAIRS AND CARRIAGE ..	33,752		
				12.—MISCELLANEOUS ..	20,867		
Interest on sale-proceeds on waste lands benefited.	3,63,013	23,922	3,87,535	TOTAL ..	59,598	488	60,056
				6.—REFUNDS OF REVENUE.	2,305	25	2,330
				TOTAL ..	39,27,117	60,160	40,17,577
				Indirect Charges debit-able to Revenue Account as per Account No. 5.	2,39,955	5,653	2,45,608
Total ..	22,29,740	2,02,393	24,31,133	TOTAL CHARGES ..	41,67,372	95,813	42,98,183
TOTAL RECEIPTS ..	1,23,60,818	8,11,018	1,31,71,760	Balance, Net Revenue ..	81,92,446	7,16,120	80,08,551
				GRAND TOTAL ..	1,23,29,818	8,11,018	1,31,71,760

(a). Includes Rs. 1,014 on account of fees for collection of Revenue.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sichawal Canal Project

No. 4.- INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount. Rs.		Amount. Rs.
Total Interest of 1917-18 to end of 1917-18	13,72,554	Net Reserve realized to end of 1917-18	11,22,125
Do. for the year 1918-19	12,50,019	Do. during 1918-19	7,14,125
Total due by up to 31st March 1919	26,22,573		
Less held out by during 1918-19	12,51,225		
Balance Capital at charge	13,71,348		
Interest at 2 1/2% per cent	44,558		
Total	14,15,906		
Balance Revenue after defraying interest charges	13,99,351		
Total	13,99,351	Total	24,50,551

No. 5.- ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous 1918-19.	Total.
CAPITAL—		
Capitalization of Abatement of Land Revenue	3,375	3,375
Leave and Pension Allowance	26,507	26,507
Total	30,882	30,882
REVENUE—		
Capitalization of Abatement of Land Revenue	335	335
Leave and Pension Allowance	26,507	26,507
Total	26,842	26,842
Grand Total	57,724	57,724

No. 6.- STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

Particulars	HAWKESBURY CUMBERLAND TRUST			GOVERNMENT PROVISIONS			Total Charges to date, sanctioned and current estimates.	REMARKS
	Expenditure to date (to 31st March 1919)	Expenditure to date (to 31st March 1919)	Total	Charges to date	Expenditure to date (to 31st March 1919)	Expenditure to date (to 31st March 1919)		
Direct Charges—								
Works	7,01,301	2,44,472	9,45,773	—	—	—	9,45,773	
Initial labour	2,13,500	59,440	2,72,940	—	—	—	2,72,940	
Tools and Plant	22,351	13,756	36,107	—	—	—	36,107	
Surplus to Balance	—	—	—	42,735	—	—42,735	42,735	
Total	9,37,152	3,17,668	12,54,820	42,735	—	—42,735	12,54,820	
Less Receipt on Capital Account	1,124	—	1,124	—	—	—	1,124	
Net Total	9,36,028	3,17,668	12,53,696	42,735	—	—42,735	12,50,440	
Indirect Charges—								
Capitalized abatement of Land Revenue	2,374	234	2,608	—	—	—	2,608	
Leave and Pension Allowance	26,507	8,321	34,828	—	—	—	34,828	
Total	31,570	8,555	40,125	—	—	—	40,125	
Grand Total	9,67,600	3,26,223	12,93,823	42,735	—	—42,735	13,00,674	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated	Expenditure against closed Estimate.
	Imperial.				
	Previous.	1918-19.	Total.		
I.—WORKS.					
1.—HEAD WORKS—					
	Rs.	Rs.	Rs.	Rs.	Rs.
A.—Preliminary Expenses	12,619	...	12,619		
B.—Land	31,772	...	31,772		
C.—Works	21,80,792	41,314	22,21,706		
K.—Buildings	1,34,042	12,746	1,47,687		
O.—Miscellaneous	19,273	...	19,273		
P.—Maintenance	28,020	...	28,020		
TOTAL	24,07,018	54,069	24,61,077		
2.—MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	93,683	55	93,738		
B.—Land	2,49,781	...	2,49,781		
D.—Regulators	2,71,296	1,69,014	4,40,300		
E.—Falls and Weirs	2,34,947	...	2,34,947		
F.—(1)—Other Cross Drainage Works ..	1,20,258	...	1,20,258		
G.—Bridges	6,91,284	...	6,91,284		
H.—Escapes	4,78,540	...	4,78,540		
J.—Mills	1,07,620	...	1,07,620		
K.—Buildings	10,47,620	7,072	10,54,701		
L.—Earthwork	22,03,007	12,563	22,05,670		
M.—Plantations	80,179	...	80,179		
O.—Miscellaneous	46,457	...	46,457		
P.—Maintenance	32,372	...	32,372		
Total	57,53,014	1,68,701	59,21,715		
3.—DISTRIBUTARIES—					
A.—Preliminary Expenses	61,101	...	61,101		
B.—Land	1,16,934	2,870	1,19,804		
C.—Works	15,46,549	6,277	15,52,826		
L.—Earthwork	13,52,663	21,110	13,73,773		
O.—Miscellaneous	5,50,204	1,035	5,51,239		
P.—Maintenance	4,663	...	4,663		
Total	26,71,013	29,511	27,00,524		

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

NO. 2. CAPITAL ACCOUNTS FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	PERIOD CHARGES.			Capital Item No. 401, Estimates.	Cost of Instrument No. 402, Estimated
	Expense.				
	Previous	1918-19.	Total	P.	No.
	Rs.	Rs.	Rs.	P.	No.
I.—DRAINAGE AND PROTECTIVE WORKS.—					
A.—Preliminary Expenses	21,750	..	21,750	..	..
B.—Land	17,600	..	17,600	..	..
C.—Works	2,884	..	2,884	..	..
I.—Earthwork	17,700	..	17,700	..	..
D.—Miscellaneous	1,150	..	1,150	..	..
Total	54,384	..	54,384	..	..
Total I.—WORKS	54,384	54,384	1,08,768	1,08,768	1,08,768
II.—ESTABLISHMENT.					
E.—DIRECTOR	6,000	..	6,000	..	..
F.—EXECUTIVE	12,000	1,00,000	1,12,000	..	..
G.—MEDICAL	500	..	500	..	..
H.—FISCAL SURVEY	400	..	400	..	..
Total	18,900	1,00,000	1,18,900	1,18,900	1,18,900
III.—TOOLS AND PLANT.					
I.—NAVIGATION PLANT .. .. .	..	..	..	..	..
J.—MOTOR TRANSPORT	20,000	11,000	31,000	..	..
K.—REPAIRS AND CARRIAGE	2,000	..	2,000	..	..
Total	22,000	11,000	33,000	33,000	33,000
IV.—SUPPLY ACCOUNT.					
L.—STOCK	20,000	20,000	40,000	..	..
M.—STOCK PURCHASE .. .. .	..	2,000	2,000	..	..
N.—STOCK SALES	1,000	—1,000	..	..	..
O.—MISCELLANEOUS	400	2,000	2,400	..	..
P.—LOSS ON STOCK .. .. .	..	..	..	..	..
Total	20,400	21,000	41,400	..	..
GRAND TOTAL	1,05,684	1,21,384	1,27,068	1,27,068	1,27,068
V.—LESS RECEIPTS ON CAPITAL ACCOUNT	62,000	..	62,000	62,000	62,000
Net Total	43,684	1,21,384	1,65,068	1,65,068	1,65,068
AFFORTIONMENT.					
49.—IRRIGATION WORKS	1,65,068	1,65,068	1,65,068	..	..

(a) Includes Accounts Establishment charges from 1915-16 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1918-19	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ..	2,83,53,441	20,47,774	3,15,71,215	1. - EXTENSIONS AND IMPROVEMENTS.			
Sales of water ...	1,18,047	10,584	1,28,631	1. HEAD WORKS ...	4,52,427	35,379	4,87,805
Supply of towns ..	5,550	967	6,526	2. MAIN CANAL AND BRANCHES.	2,00,242	6,674	2,06,916
Receipts from Plantations	36,571	6,315	43,386	3. DISTRIBUTARIES ...	2,53,392	10,479	2,63,871
Receipts from other Canal produce.	10,907	629	11,536	4. DRAINAGE AND PROTECTIVE WORKS.	8,290	1,341	9,631
Water power ...	2,11,459	31,158	2,43,017	TOTAL 1 ...	9,44,351	53,873	9,98,224
Rent of Buildings ..	99,063	6,071	1,05,134	2.—MAINTENANCE AND REPAIRS.			
Fines ..	11,707	622	12,329	1. HEAD WORKS ...	8,11,474	45,871	8,57,345
Miscellaneous and other Receipts.	1,24,415	8,430	1,32,854	2. MAIN CANAL AND BRANCHES.	20,91,925	1,03,209	21,95,134
Total ..	2,95,71,560	26,83,059	3,22,51,628	3. DISTRIBUTARIES.	19,04,272	1,14,251	20,18,523
				4. DRAINAGE AND PROTECTIVE WORKS	72,180	1,284	73,473
				TOTAL 2 ...	48,79,861	2,61,614	51,44,475
				3.—COMPENSATION.	5,847	332	6,179
				4.—ESTABLISHMENT	6,55,464		
				5.—DIRECTOR AND ACCOUNT	23,74,303		
				6. EXECUTIVE ESTABLISHMENT.		(b)	(c)
				7. MEDICAL DO.	1,42,725	4,62,900	61,23,263
				7A.—REVENUE DO.	25,87,871		
				TOTAL ...	56,60,363	4,62,900	61,23,263
				8.—TOOLS AND PLANT			
				1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	5,123		
				2. PLANTS AND MACHINERY	30,708		
				3. TOOLS ...	5,787		
				4. NAVIGATION PLANTS	1,060		
				5. CAMP EQUIPMENT ...	268		
				6. LAMP STOCK ...	644		
				7. OFFICE FURNITURE	6,558		
				8. MISCELLANEOUS ...	51,691		
				9. REPAIRS AND CAPRIAGE.	93,524		
				TOTAL ...	2,04,341	13,000	2,18,036
				6.—REFUNDS OF REVENUE	10,470	140	10,610
				7.—PROFIT AND LOSS			
				TOTAL ...	1,17,05,238	7,95,549	1,25,00,787
				Indirect Charges debitable to Revenue account as per Account No. 5	7,07,320	64,806	8,58,132
				TOTAL CHARGES ..	1,21,98,561	8,60,355	1,33,53,919
				Balance Net Revenue ..	2,89,95,139	31,16,880	3,24,12,325
TOTAL RECEIPTS ..	4,14,91,005	12,77,241	4,57,71,244	GRAND TOTAL ...	4,14,91,005	42,77,211	4,57,71,211

(b) Includes Rs. 71,921, on account of fees for Collection of Revenue.

(c) Excludes share of Account Establishment from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1:17:18 ..	82,04,520	Net Revenue realized to end of 1917-18 ..	2,50,000
Do. for the year 1918-19 ..	..	Do. during 1918-19 ..	34,12,500
Total outlay to end of 1st March 1918—Rs. 1,62,68,800			
Deduct : outlay during 1918-19 ..	2,12,100		
Mean Capital at charge ..	1,60,56,700		
Interest at 3.48 1/2%	5,50,000		
Total ..	91,67,800		
Balance Revenue after defraying interest charges ..	2,50,000		
Total ..	8,31,12,500	Total ..	8,31,12,500

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of statement of Land Revenue ..	81,000	..	81,000
Leave and Pension Allowances ..	3,02,450	10,230	3,12,680
Total ..	3,83,450	10,230	3,93,680
REVENUE—			
Capitalization of statement of Land Revenue ..	570	..	570
Leave and Pension Allowances ..	7,02,450	64,000	7,66,450
Total ..	7,03,020	64,000	7,67,020
GRAND TOTAL ..	11,86,470	64,230	12,50,700

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No. 4.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.	
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Secretary's No	
DIRECT CHARGES.								1088	3,784
Works	1,20,74,489	25,280	1,26,99,773	4,95,696	6,14,433	1,18,837	1,31,95,269	27-3-19	16,714
Establishment	21,00,858	1,35,650	23,20,408	..	1,32,757	1,32,757	23,20,408	1086	42,611
Tools and Plant	3,62,050	12,831	3,75,788	..	9,036	9,036	3,75,788	27-3-19	15,928
Suspense Balances	..	..	..	4,83,028	..	-4,33,928	4,33,928	1742	8,192
Total	1,52,28,707	1,73,662	1,64,01,060	9,20,621	7,56,226	-1,73,205	1,63,31,490	11-5-18	5,412
Less Receipts on Capital Account.	62,600	..	62,600	..	..	..	62,600	1150 W.I.	25,228
Net Total	1,61,06,608	1,73,662	1,63,39,360	9,20,621	7,56,226	-1,73,205	1,62,68,881	94-18	35,750
INDIRECT CHARGES.								22-6-18	6,846
Capitalized abatement of Land Revenue.	83,000	..	83,000	..	..	..	83,000	0904 W.I.	28,207
Leave and Pension Allowances.	3,06,721	18,977	3,25,698	..	..	..	3,25,698	20-6-18	1,923
Total	3,89,721	18,977	4,08,698	..	..	..	4,08,698	1039 W.I.	21,440
GRAND TOTAL	1,55,65,410	1,92,639	1,67,48,065	9,29,621	7,56,226	-1,73,205	1,66,77,579	3-9-18	8,813
								0440 W.I.	13,252
								3-7-18	3,09,736
								1181 W.I.	7,596
								18-9-18	4,073
								2552 W.I.	6,176
								21-11-18	9,083
								2354 W.I.	40,644
								27-11-18	1,047
								3421	98,181
								9-12-18	2,432
								237 W.I.	7,827
								15-1-19	10,830
								504 W.I.	5,446
								7-2-19	901
								807 W.I.	9,848
								5-7-19	2,297
								1049 W.I.	1,520
								22-3-10	6,424
								1047 W.I.	7,560,226
								22-3-10	
								078 W.I.	
								4-10-17	
								2940	
								13-11-17	
								2934	
								13-11-17	
								3013	
								17-11-17	
								245	
								18-1-18	
								301	
								31-1-18	
								401	
								8-2-18	
								578	
								11-2-18	
								52	
								11-2-18	
								807	
								4-3-18	

(a) Includes Rs. 2,05,833 actual direct Expenditure on Shahpur Imperial Canal.

(b) Includes Rs 998 on account of indirect Expenditure on Shahpur Imperial Canal.

Both the above will be transferred to the debit of this project Canal on completion of the Shahpur branch of the Lower Jhelum Canal, vide Secy.'s P.W.D Branch, No. 085 A. I, dated 7th June 1905.

(c) Revised project estimate mentioned in Secy. of State's despatch No. 5, dated 10-2-1905.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Indus Inundation Canals Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	DIRECT CHARGES			Capital Construction as sanctioned (construction Estimate closed on 31st March 1916).	Expenditure not closed Estimate.
	Indus		Total.		
	Previous	1915-16.			
	Rs.	Rs.	Rs.	Rs.	Rs.
1.—WORKS.					
2.—Main Canal and Branches—					
A.—Preliminary Expenses	..	9,321	..	9,321	
B.—Land	..	23,163	..	23,163	
D.—Regulators	..	77,501	..	77,501	
E.—Falls and Weirs	..	21,000	..	21,000	
F.—Races and Hill Trench Weirs	..	40	..	40	
G.—Wells	..	45,921	..	45,921	
H.—Escapes	..	11,021	..	11,021	
K.—Rollings	..	1,40,000	..	1,40,000	
L.—Earthwork	..	12,72,187	..	12,72,187	
O.—Miscellaneous	..	24,788	..	24,788	
Total	..	17,72,400	..	17,72,400	
3. DISTRICTS—					
A.—Preliminary Expenses	..	3,047	..	3,047	
B.—Land	..	26,15	..	26,15	
C.—Works	..	76,412	—301	6,687	
L.—Earthwork	..	1,55,142	..	1,55,142	
O.—Miscellaneous	..	8,830	..	15,570	
Total	..	1,15,234	—301	2,14,900	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Indus Inundation Canals Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction estimate closed on 31st March 1894)	Expenditure against closed Estimate.
	Imperial.				
	Previous.	1918-19.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
I.—DRAINAGE AND PROTECTIVE WORKS.—					
K.—Buildings	1,612	..	1,612		
L.—Earthwork	3,43,078	..	3,43,078		
TOTAL ..	3,44,691	..	3,44,691		
TOTAL I.—WORKS ..	24,22,377	—331	24,22,046	24,22,046	24,22,046
II.—ESTABLISHMENT.					
5. DIRECTION AND ACCOUNT (a) ..	1,11,878	—90	4,53,450		
6. EXECUTIVE	3,46,667				
7. MEDICAL	567		..	567	
TOTAL ..	4,59,113	—90	4,59,023	4,59,023	4,59,023
III.—TOOLS AND PLANT.					
12. MISCELLANEOUS	25,083	—3	25,080		
13. REPAIRS AND CARRIAGE					
TOTAL ..	25,083	—3	25,080	25,080	25,080
IV.—SUSPENSE ACCOUNT.					
14. STOCK	56,280	2,733	59,013		
15. STOCK PURCHASES .. .. .	..	—222	—222		
16. MISCELLANEOUS ADVANCES	1,118	—846	272		
18. LONDON STORES .. .. .	..	..	..
TOTAL ..	57,398	1,665	59,063		
GRAND TOTAL ..	29,63,971	1,241	29,65,212	29,66,149	29,66,149
V. LESS RECEIPTS ON CAPITAL ACCOUNT ..	63,616	226	63,852	63,852	63,852
NET TOTAL ..	29,00,355	1,015	29,01,360	28,42,297	28,42,297
APPORTIONMENT.					
40. IRRIGATION WORKS... .. .	21,77,842	1,005	21,78,847		
43. M. W. NAVIGATION, IMPERIAL ..	7,22,513		7,22,513		

(a) Excludes share of Accounts Establishment from 1912-13. to 1917-18.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Indus Inundation Canals Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Receipts.	IMPERIAL.			CHARGES.	MUNICIPAL.		
	Previous	1918-19	Total		Previous	1918-19	Total
	Rs.	P.	Rs.		P.	P.	Rs.
Occupiers' rates ..	22,51,201	1,11,484	23,62,685	1. EXTENSIONS AND IMPROVEMENTS.	10,61,580	10,500	10,72,080
Owners' rates on irrigated land ..	92,180	...	92,180	2.—MAINTENANCE AND REPAIRS.	70,791	1,000	71,791
Sales of water ..	6,167	18	6,185	3.—FURNITURE	10,27,536	4,800	10,32,336
Supply of town ..	1,418	...	1,418	4.—DRAINAGE AND FLOOD CONTROL WORKS.	...	...	...
Receipts of plantations ..	1,37,404	2,150	1,39,554	Total 1. A	21,22,907	25,300	21,48,207
Govt. share of Dhundi Produce.	11,63,678	...	11,63,678	2.—MAINTENANCE AND REPAIRS.	67,22,131	60,900	68,21,031
Receipts from other Canal Produce.	4,387	85	4,472	3.—WATER COURTS AND HEADWORKS.	3,46,756	18,000	3,64,756
Rent of Buildings ..	...	...	...	4.—DRAINAGE WORKS.	10,77,467	5,000	10,82,467
Fines ..	70,644	88,012	1,58,656	Total 1. B	81,46,754	1,22,900	82,69,654
Miscellaneous and other receipts.	...	...	...	2.—COMPENSATION FOR ESTABLISHMENT	6,200	...	6,200
Total ..	39,05,714	2,00,517	41,06,231	3.—FURNITURE AND ACCOUTS	5,74,751	...	5,74,751
Contribution of Silt Clearance.	4,18,934	...	4,18,934	4.—FURNITURE ESTABLISHMENT	20,02,114	70,000	20,72,114
Clearance Rates ..	12,78,607	...	12,78,607	5.—MEDICAL ESTABLISHMENT	33,371	...	33,371
Total ..	55,03,503	2,00,517	57,04,020	6.—REVENUE FUND TRUSTMENT	7,00,721	23,500	7,24,221
Share of Land Revenue collected in the Civil Department.	1,10,08,440	2,22,312	1,12,30,752	7.—PLANTATION ESTABLISHMENT	2,000	...	2,000
Interest on sales proceeds of waste lands benefited.	...	40	40	Total	45,78,334	1,54,400	47,32,734
Total ..	1,10,08,440	2,22,312	1,12,30,752	1.—TOOLS AND PLANT	...	...	...
Indirect Charges attributable to Revenue Account as per Account No. 2.	...	...	...	2.—ELECTRICITY MOTOR WORKS AND DRAWING MATERIALS	...	...	...
Total ..	1,10,08,440	2,22,312	1,12,30,752	3.—FURNITURE AND MACHINERY	...	...	...
Balance Net Revenue ..	1,67,02,428	4,27,790	1,71,30,218	4.—TOOLS	412	...	412
				5.—NAVIGATION PLANT	34	1,400	1,434
				6.—CAMP EQUIPMENT	212	...	212
				7.—LIVE STOCK	...	...	...
				8.—OFFICE FURNITURE	...	...	...
				9.—REPAIRS & CARRIAGE	34,772	...	34,772
				10.—MISCELLANEOUS	37,874	...	37,874
				Total	75,061	1,400	76,461
				1.—REFUNDS OF REVENUE	4,912	...	4,912
				2.—PROFIT AND LOSS	1,500	...	1,500
				Total	1,400,132	2,56,504	1,402,636
				Indirect Charges attributable to Revenue Account as per Account No. 2.	6,93,067	18,000	7,11,067
				Total Charges	1,73,70,704	2,74,504	1,76,45,208
				Balance Net Revenue	13,72,036	1,68,004	15,40,040
				GRAND TOTAL	1,67,02,428	4,29,790	1,71,32,218

(a) Excludes share of accounts established from 1912-13 to 1917-18.

(b) Includes Rs. 8,476 on account of Fee for collection of Revenue.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Indus Inundation Canals Project.

No. 4.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918 19

	Amount.		Amount.
Total Interest charges to end of 1917-18	Rs. 21,38,965	Net Revenue realized to end of 1917 18..	Rs. 1,72,036
Do for the year 1918 19 .. ..	.. ..	Do. during 1918-19..	1,68,904
Total outlay to 31st March 1919 .. 22,01,360 ..	.. ..	Balance net Interest charges ..	7,07,027
Less half outlay during 1918-19 ... 502 ..	.. ..	
	29,00,854		
Mean capital charge ... ..	.. ..	
Interest at 3-4818	1,01,032		
Total	22,17,967	Total	22,27,967

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918 19.

Particulars.	Previous	1918-19	Total.
	Rs	Rs	Rs
CAPITAL—			
Capitalization of abatement of Land Revenue	8,657		8,657
Leave and Pension Allowances	71,741	—12	71,728
Total	80,398	—12	80,386
REVENUE—			
Capitalization of abatement of Land Revenue	26,558	325	26,883
Leave and Pension Allowances	6,69,507	14,707	6,84,214
Total	6,96,065	15,032	7,11,097
GRAND TOTAL	7,76,463	15,019	7,91,482

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS	CHARGES AGAINST CRO-ED SANCTIONS.			CURRENT SANCTIONS			Total charges to date against old and current sanctions	REMARKS
	Expnditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance Estimate		
DIRECT CHARGES—								
Works ..	Rs. 6,03,648	Rs. 17,59,398	Rs. 24,22,046	...	...	...	Rs. 24,22,046	
Establishment ..	52,87,500	2,71,819	4,59,023	...	...	...	4,59,023	
Tools and Plant ..	7,670	24,410	26,080	...	...	...	26,080	
Suspense Balance ..			...	59,003	...	—59,003	59,003	
TOTAL ..	7,61,522	21,54,627	29,06,149	59,003	...	—59,003	29,06,149	
Let's Receipts on Capital Account.	63,616	230	63,846	...	...	...	63,846	
Net TOTAL ..	6,57,906	21,54,397	28,12,217	59,003	...	—59,003	28,01,30	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue.	57	8,600	8,657	...	...	...	8,657	
Leave and Pension Allowances.	19,672	52,056	71,728	...	...	...	71,728	
TOTAL ..	19,729	60,656	80,385	...	...	...	80,386	
GRAND TOTAL ..	7,17,935	22,15,047	29,22,082	59,003	...	—59,003	29,21,745	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chenab Canal Project.

No 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19

HEAD OF ACCOUNT.	DIRECT CHARGES.			Cost of construction, from the approved estimate, as estimated by Committee formed on 31st March, 1917.)	Expenditure against the Estimate.
	Capital				
	Prelim. Est.	1918-19.	Total.		
1.—WORKS.					
1.—HEAD WORKS.—	Rs.	Rs.	Rs.		
A.—Preliminary Expenses	8,251	...	8,251		
B.—Land	51,415	...	51,415		
C.—Works	6,11,161	...	6,11,161		
E ₁ —Buildings	1,50,310	2,000	1,52,310		
D.—Miscellaneous	53,271	22,501	75,772		
F.—Maintenance	1,31,115	...	1,31,115		
Q.—Losses of Stock	7,317	...	7,317		
TOTAL	20,60,435	24,011	20,84,446		
2.—MAIN CANAL AND BRANCHES.—					
A.—Preliminary Expenses	77,675	135	77,810		
B.—Land	9,71,514	50	9,71,564		
D.—Regulators	7,03,007	4,525	7,07,532		
E.—Piers and Weirs	6,50,027	...	6,50,027		
F ₁ —Other Cross Drainage Works	21,74,555	...	21,74,555		
G.—Bridges	17,71,370	10,221	17,81,591		
K.—Buildings	5,79,731	15,407	5,95,138		
L.—Earthwork	69,43,777	...	69,43,777		
M.—Plantations	51,302	7,201	58,503		
O.—Miscellaneous	68,275	476	68,751		
P.—Maintenance	3,20,677	...	3,20,677		
Q.—Losses of Stock	12,374	...	12,374		
TOTAL	1,46,76,203	41,425	1,46,77,628		
3.—DISTRIBUTARIES.—					
A.—Preliminary Expenses	1,43,749	300	1,44,049		
B.—Land	6,52,547	3,178	6,55,725		
C.—Works	16,37,793	14,502	16,52,295		
L.—Earthwork	19,10,478	27,421	19,37,899		
O.—Miscellaneous	3,71,219	58,499	4,29,718		
P.—Maintenance	14,308	...	14,308		
TOTAL	47,32,799	115,080	47,48,879		

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chenab Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction estimate closed on 31st March 1917.)	Expenditure against closed estimates.
	Imperial.				
	Previous.	1918-19	Total		
	Rs.	Rs.	Rs.	Rs.	Rs.
I. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses ..	0,286	1,220	10,615		
B.—Land	1,04,252	720	1,04,061		
C.—Works	40,800	..	40,800		
L.—Earthwork	10,46,121	78	10,46,202		
O.—Miscellaneous	17,367	15	17,382		
TOTAL ..	12,17,820	2,051	12,19,880	..	..
TOTAL I.—WORKS ..	2,77,87,261	54,431	2,78,41,695	2,70,30,917	2,77,74,755
II.—ESTABLISHMENT.					
5. DIRECTION	10,04,560	15,110	44,80,380		
6. EXECUTIVE	32,33,430				
7. MEDICAL	1,37,200			..	
8. SPECIAL SURVEY	82,573	..	82,573		
6½. SPECIAL FIELD SURVEY	110	..	110		
LEAVE AND PENSION ALLOWANCES ..	..	..	..
TOTAL ..	45,47,962	15,110	45,63,072	45,85,042	45,63,072
III.—TOOLS AND PLANT.					
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	688	..	688		
2. PLANT AND MACHINERY	5,221	..	5,221		
3. TOOLS	2,250	..	2,250		
4. NAVIGATION PLANT	1,161	..	1,161		
5. CAMP EQUIPMENT	35	..	35		
6. LIVE STOCK	574	..	574		
7. OFFICE FURNITURE	1,901	54	2,015		
8. REPAIRS AND CARRIAGE	1,25,804	—49	1,25,845		
11. RAILWAY PLANT AND ROLLING STOCK ..	8,55,370	..	8,55,370		
12. MISCELLANEOUS	11,08,873	538	11,09,411		
TOTAL ..	21,92,027	543	21,92,570	21,94,104	21,92,570
IV.—SUSPENSE ACCOUNT.					
14. STOCK	7,96,438	—62,416	7,34,022		
15. STOCK PURCHASES	—3,506	1,793	—1,713		
15½. STOCK SALES	14,834	—14,788	36		
16. MISCELLANEOUS ADVANCES	4,002	1,375	5,067		
17. LONDON STORES .. ..	..	..	..
TOTAL ..	5,12,458	—74,046	7,38,412	..	..
GRAND TOTAL ..	3,63,39,711	—3,462	3,63,35,749	3,47,10,990	3,65,30,397
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	5,59,865	4,102	5,64,067	5,64,067	5,64,067
NET TOTAL ..	3,47,79,846	—3,164	3,47,71,692	3,41,46,933	3,39,66,340
APPORTIONMENT.					
40. IRRIGATION WORKS	3,46,71,975	—8,164	3,46,63,821	..	..
43. M. W. AND NAVIGATION	1,07,871	..	1,07,871	..	..

(c) Share of accounts Establishment excluded from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chenab Canal Project.

No. 2.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	INTERNAL.			CHARGES.	INTERNAL.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates...	64,47,74	16,20,724	2,77,202	(1) — EXTENSIONS AND IMPROVEMENTS.			
				1. HEADWORKS ..	30,827	2,410	41,012
				2. — MAIN CANAL & BRANCHES.	2,87,512	19,030	2,78,912
				3. — DISTRIBUTORIES ..	9,074	5,183	19,223
				4. — DRAINAGE AND PROTECTIVE WORKS.	...	45	45
Sales of water ...	2,519	...	3,602	TOTAL (1) ..	3,09,733	27,678	2,36,193
				5. — MAINTENANCE AND REPAIRS.			
Water supply of towns ..	1,514	..	1,514	1. — HEAD WORKS ..	2,85,441	75,277	2,77,002
				2. — MAIN CANAL & BRANCHES	9,23,724	2,38,510	11,77,240
				3. — DISTRIBUTORIES ..	2,80,184	2,02,777	1,58,240
Receipts from plantations ..	2,637	400	2,637	4. — DRAINAGE WORKS.	1,6,825	2,130	1,20,001
				TOTAL (5) ..	20,49,974	4,28,694	21,22,116
				6. — COMPENSATION ..	10,180	6,220	14,350
Receipts from other Canal produce.	1,399	325	1,724	(2) — ESTABLISHMENT.			
				6. — EXPERTS' FEES AND ACCOUNTS	1,38,175	...	...
				7. — RESISTIVE PAYMENTS.	2,20,412	35,324	10,22,046
				8. — REVENUE ..	7,30,914	1,78,230	2,62,514
Rent of buildings ...	70,379	6,316	35,713	TOTAL (2) ..	13,08,990	4,28,694	10,31,902
				(3) — TOOLS AND PLANT.			
				1. — POWERFUL INVESTMENTS AND UNPAID DEBITORS.	— 850	...	...
Fines ...	4,175	1,701	2,037	2. — FRUIT AND MACHINERY...	2,789	6,727	33,441
				12. MISCELLANEOUS ..	14,012	...	...
				13. — REPAIRS AND CARRIAGE	11,820	...	...
Miscellaneous and other receipts.	55,299	20,443	1,15,732	TOTAL ..	27,314	6,827	33,741
TOTAL ...	65,75,310	18,60,071	34,41,330	(4) — EXPENDITURE OF REVENUE.			
				14. — REVENUE ..	6,019	885	2,914
Interest on sale for needs of waste lands benefited.	2,16,238	1,15,525	3,31,923	TOTAL ..	35,68,870	12,74,214	50,95,238
Share of land revenue ..	6,70,876	2,824	6,64,450	Indirect charges payable to Revenue Account as per Account No. 2.	1,62,025	75,122	2,69,147
Collected in the Civil Department.	8,77,264	1,10,169	9,05,413	TOTAL charges ..	40,84,004	12,81,881	53,66,538
TOTAL RECEIPTS ..	74,62,683	19,85,220	94,40,203	Balance Net Revenue ..	33,64,979	7,07,339	40,74,418
				GRAND TOTAL ..	74,82,583	19,85,220	94,40,503

(a).—Includes Rs. 46,164 on account of fees for collection of revenue.

b).—Excluding Share of Account's Establishment from 1915-16 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chenab Canal Project

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19

	Amount.			Amount.
	Rs.		Rs.	
Total Interest charges to end of 1917-18 ..	...	Rs. 65,00 8/5	Net revenue realized to end of 1917-18 ..	Rs. 33 68,079
Do. for the year 1918-19 ..	...		Do. during 1918-19 ..	7,06,359
Total outlay to end of 31st March 1919 3,47,71,632				
Less half outlay during 1918-19 ..	4,077		Balance, net interest charges ..	66,46,263
Mean capital at charge ..	3,47,76,769			
Interest at 3 1/2% per cent ..	..	12,10,823		
Total ..	..	1,07,20,651	Total ..	1,07,20,651

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

PARTICULARS.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ..	3,66,376	...	3,66,376
Leave and Pension Allowances ..	6,31,365	2,118	6,31,500
Total ..	9,95,760	2,118	9,97,876
REVENUE—			
Capitalization of abatement of Land Revenue ..	300	60	260
Leave and Pension Allowances ..	1,85,426	76,472	2,70,897
Total ..	1,95,826	76,532	2,71,147

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctions Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
DIRECT CHARGES—								
Works ..	2,76,68,102	2,16,602	2,77,71,755	66,810	1,86,192	89,282	2,78,41,093	Sanction to the completion schedule is awaited.
Establishment ..	41,57,533	76,730	46,62,072	...	22,370	22,470	46,64,072	
Tools and Plant ..	21,90,148	2,442	21,92,670	...	1,831	1,531	21,92,670	
Supplies Balance ..	..	...	...	7,38,412	..	-7,38,412	7,38,412	
Total ..	3,42,36,673	2,93,734	3,45,39,297	8,05,362	1,80,593	-6,24,789	3,47,71,092	
Less Receipts on Capital Acct. ..	5,59,866	4,192	5,64,057	...	..	..	5,64,057	
Net Total ..	3,40,76,803	2,89,532	3,39,66,340	8,05,362	1,80,593	-6,24,789	3,47,71,092	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue.	3,66,376	0,718	3,66,376	...	...	..	3,66,376	
Leave and Pension Allowances ..	6,31,500	10,003	6,31,500	...	...	...	6,31,500	
Total ..	9,97,876	17,328	9,97,876	...	...	..	9,97,876	
GRAND TOTAL ..	3,40,87,366	3,06,860	3,40,64,216	8,05,362	1,80,593	-6,24,789	3,47,49,667	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Bari Doab Canal Project.

NO. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19

NAME OF ACCOUNT.		Disbursements.			Cost of construction now estimated at end of year—31st March 1919	Expenditure against closed Repts. final.
		Imperial.				
		Previous.	1918-19.	Total.		
I.—WORKS.		Rs.	Rs.	Rs.	Rs.	Rs.
1. HEAD WORKS—						
A.—Preliminary Expenses	.. ..	12,866	...	12,866		
B.—Land	.. ..	2,27,055	2,002	2,29,057		
C.—Works	.. ..	47,63,625	3,775	47,67,400		
K.—Buildings	.. ..	1,02,755	9,845	1,12,600		
O.—Miscellaneous	.. ..	2,392	...	2,392		
P.—Maintenance	.. ..	77,505	...	77,505		
Q.—Loss on Stock	.. ..	1,215	...	1,215		
Total		52,67,008	14,822	52,81,830		
2. MAIN CANAL AND BRANCHES—						
A.—Preliminary Expenses	.. ..	1,22,250	...	1,22,250		
B.—Land	.. ..	12,755	—511	12,244		
D.—Regulator	.. ..	1,27,722	...	1,27,722		
E.—Falls and Weirs	.. ..	4,12,552	...	4,12,552		
P.—River and Hill Terrace Works	.. ..	671	...	671		
P. (1) — Other Cross Drainage Works	.. ..	4,21,425	...	4,21,425		
G.—Bridges	.. ..	4,20,572	...	4,20,572		
H.—Morages	.. ..	52,556	...	52,556		
J.—Mills	.. ..	...	1,717	1,717		
K.—Buildings	.. ..	13,57,227	32,724	13,90,001		
L.—Earthwork	.. ..	32,37,183	...	32,37,183		
M.—Pier Stations	.. ..	1,47,523	4,950	1,52,473		
N.—Miscellaneous	.. ..	25,212	75	25,287		
P.—Maintenance	.. ..	2,27,702	834	2,28,536		
Q.—Loss on Stock	.. ..	4,220	...	4,220		
Total		62,11,581	38,820	62,50,401		
3. DISTRIBUTARIES—						
A.—Preliminary Expenses	.. ..	1,01,147	3,004	1,04,151		
B.—Land	.. ..	1,25,257	11,322	1,36,579		
C.—Works	.. ..	17,09,523	27,472	17,37,000		
L.—Earthwork	.. ..	13,41,749	21,417	13,63,166		
O.—Miscellaneous	.. ..	14,52,626	—2,400	14,50,226		
P.—Maintenance	.. ..	31,449	...	31,449		
Total		46,15,351	62,822	46,78,173		
4. DRAINAGE AND PROTECTIVE WORKS—						
A.—Preliminary	.. ..	8,713	74	8,787		
B.—Land	.. ..	6,491	...	6,491		
C.—Works	.. ..	3,214	1,700	4,914		
L.—Earthwork	.. ..	40,347	3,114	43,461		
O.—Miscellaneous	.. ..	12,014	423	12,437		
Total		70,829	5,311	76,140		
TOTAL I.—WORKS		1,06,71,687	2,04,791	1,08,76,478	1,06,82,180	1,04,00,391

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Bari Doab Canal Project.

NO. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated. (Construction Estimate closed on 31st March 1917).	Expenditure against closed Estimate.
	Imperial.				
	Previous.	1918-19.	Total.		
II.—ESTABLISHMENT.	Rs.	Rs.	Rs.	Rs.	Rs.
5. DIRECTION AND ACCOUNTS	8,45,632	61,765	31,57,879	1,66,82,150	
6. EXECUTIVE	25,12,582				
7. SPECIAL SURVEY .. ..	...			
TOTAL ..	30,90,114	61,765	31,57,879	32,06,180	31,67,879
III. TOOLS AND PLANT.					
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	2,274	4,010	19,50,744		
2. PLANT AND MACHINERY	11,070				
3. TOOLS	2,525				
4. NAVIGATION PLANT	4,684				
5. CAMP EQUIPAGE	1,410				
6. LIVE STOCK	200				
7. OFFICE FURNITURE	4,217				
8. REPAIRS AND CARRIAGE	1,19,818				
9. MISCELLANEOUS	10,10,923				
10. RAILWAY PLANT AND ROLLING STOCK ..	7,83,454				
TOTAL ..	19,46,701	4,010	19,50,744	19,54,078	19,50,744
IV.—SUSPENSE ACCOUNT.					
14. STOCK	7,82,437	—97,712	6,84,725		
15. STOCK PURCHASES	—1,707	—102	—1,500		
16. STOCK SALES	400	181	650		
17. MISCELLANEOUS ADVANCES	9,711	20,485	30,206		
18. LONDON INVOICES	—1	71	—		
19. LONDON STORES .. ..	...	..	..
TOTAL ..	7,87,810	—77,137	7,10,712	..	..
GRAND TOTAL ..	2,26,05,361	1,03,459	2,26,98,113	2,18,42,408	2,16,00,017
V.—LESS RECEIPTS ON CAPITAL ACCOUNT	5,10,309	17,032	5,28,001	5,28,001	5,28,001
NET TOTAL ..	2,19,84,085	1,75,827	2,21,70,812	2,13,14,407	2,00,81,016
APPORTIONMENT.					
40.—IRRIGATION WORKS	2,18,27,104	1,75,827	2,20,03,281		
42.—M. W. AND NAVIGATION, INTERIAL ..	1,07,521	..	1,67,521		

(a) Excludes share of account Establishment from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Bari Doab Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-10.

	Rs.	Rs.		Rs.
Total Interest charges to end of 1917-18	...	45,54,555	Not Revenue realized to end of 1917-18.	10,93,577
Do. for the year 1918-10	...	...	Do. during 1918-10	31,21,935
Total outlay to 31st March 1919	2,21,70,812		Balance Interest net charges	8,07,125
Less half outlay during 1918-10	87,913			
Mean capital at charge	2,20,82,899			
Interest at 3.4818 per cent.	...	7,68,982		
Total	...	54,23,437	Total	51,21,437

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-10.

PARTICULARS.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of Land Revenue ..	44,030	17	44,225
Leave and Pension Allowances ..	4,22,715	8,617	4,31,162
Total	4,66,765	8,822	4,75,387
REVENUE—			
Leave and Pension Allowances	1,41,017	73,783	2,15,400
Total	1,41,017	73,783	2,15,101

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

Particulars.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open current sanctions.	Total.	Charges to date.	Amount of sanction of Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ..	1,60,86,806	3,13,628	1,64,00,39	1,72,08	2,81,756	-1,97,323	1,68,70,478	
Establishment	30,17,003	1,50,876	31,57,879	...	48,201	48,301	31,57,879	
Tools and Plant	10,34,767	15,977	10,50,744	...	3,334	3,334	10,50,744	
Suspense Balances	...	...	...	7,10,712	...	-7,10,712	7,10,712	
Total	2,10,28,831	4,80,361	2,15,09,017	11,80,791	3,33,361	-8,50,105	2,20,92,813	
Less Receipts on Capital Account	5,10,260	17,632	5,28,001	...	...	...	5,28,001	
Net Total	2,05,18,261	4,62,719	2,09,81,01	11,80,790	33,361	-8,50,405	2,21,70,812	
INDIRECT CHARGES—								
Capitalized statement of Land Revenue	48,950	271	49,225	...	...	...	49,225	
Leave and Pension Allowances.	4,10,040	21,122	4,31,162	...	...	...	4,31,162	
Total	4,59,000	21,397	4,75,387	11,80,790	...	...	4,75,387	
GRAND TOTAL	2,00,72,257	4,84,116	2,14,56,403	11,80,790	3,33,361	-8,50,405	2,20,46,199	

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19

Upper Jhelum Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.				DIRECT EXPENDITURE.			Credit from other sources not included.
				Expenditure.			
				Previous Year.	1918-19.	Total	
				Rs.	Rs.	Rs.	Rs.
1.—WORKS							
1.—HEAD WORKS—							
A.—Preliminary Expenses	..	..	..	7,345	..	7,345	
B.—Land	..	..	..	11,002	..	11,002	
C.—Works	..	..	..	1,818	..	1,818	
K.—Bridges	..	..	..	14,57,771	14,571	2,01,342	
O.—Miscellaneous	..	..	..	27,817	..	27,817	
P.—Maintenance	..	..	..	14,775	..	14,775	
Total				2,03,717	14,571	2,18,288	
2.—MAIN CANAL AND BRANCHES—							
A.—Preliminary Expenses	..	..	..	1,37,700	..	1,37,700	
B.—Land	..	..	..	2,37,194	—7	2,37,187	
D.—Revolving	..	..	..	33,11,225	11	33,11,236	
E.—Falls and Weirs	..	..	..	1,00,120	420	1,00,540	
F.—River and Hill Fortified Works	..	..	..	1,30,87,501	4,177	1,30,91,678	
G.—Bridges	..	..	..	1,57,710	2,411	1,60,121	
H.—Excavations	..	..	..	2,50,177	..	2,50,177	
K.—Bridges	..	..	..	7,88,638	15,712	8,04,350	
L.—Earthwork	..	..	..	1,67,00,700	11,100	1,67,11,800	
M.—Plantation	..	..	..	21,833	..	21,833	
O.—Miscellaneous	..	..	..	67,100	..	67,100	
P.—Maintenance	..	..	..	4,02,000	..	4,02,000	
Q.—Losses on Stock	..	..	..	4,577	..	4,577	
Total				2,16,37,000	20,470	2,16,57,470	
3.—DISTRIBUTARIES—							
A.—Preliminary Expenses	..	..	..	3,600	610	4,210	
B.—Land	..	..	..	4,67,917	3,700	4,71,617	
C.—Works	..	..	..	7,35,200	75,000	8,10,200	
L.—Earthwork	..	..	..	7,10,221	5,100	7,15,321	
O.—Miscellaneous	..	..	..	4,52,240	57,400	5,09,640	
Total				21,21,310	1,00,800	22,22,110	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Jhelum Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated.	Expenditure against closed estimates.
	Imperial.				
	Previous.	1918-19.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses	7,639	97	7,736		
B.—Land ... .. .	...	3	3		
C.—Works	107	820	1,017		
L.—Empl. work	513	6,745	7,259		
O.—Miscellaneous	1,381	300	1,744		
TOTAL	9,793	8,029	17,729		
TOTAL—I.—WORKS	3,42,73,507	2,93,177	3,45,66,741	3,42,80,616	3,42,26,093
II.—ESTABLISHMENT.					
5. DIRECTION AND ACCOUNT (a)	10,00,964	1,34,245	50,73,658		
6. EXECUTIVE	38,00,842				
7. MEDICAL	1,37,607				
TOTAL	4,39,483	1,34,245	50,73,658	50,85,931	50,73,658
III.—TOOLS AND PLANT.					
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	650	—391	46,13,415		
2. PLANT AND MACHINERY	28,61,692				
3. TOOLS	117				
4. NAVIGATION PLANT	1,940				
5. CAMP EQUIPAGE	558				
7. OFFICE FURNITURE	6,181				
8. REPAIRS AND CARRIAGE	1,57,052				
MISCELLANEOUS	15,95,573				
TOTAL	46,13,800	—391	46,13,415	46,13,271	46,13,115
IV.—SUSPENSE ACCOUNT.					
14. STOCK	8,87,008	—1,05,913	7,81,095		
15. STOCK PURCHASES	—31,531	10,310	—21,535		
15a. STOCK SALES	4,497	—1,007	2,80		
16. MISCELLANEOUS ADVANCES	81,440	—34,132	47,308		
17. LONDON INVOICES ... .. .	...	...	...
18. LONDON STORES .. .. .	...	...	...
TOTAL	9,41,014	—1,31,336	8,09,758		
GRAND TOTAL	4,47,67,880	2,95,695	4,50,63,575	4,30,86,828	4,30,13,700
V.—LESS RECEIPTS ON CAPITAL ACCOUNT	6,12,000	3,64,051	9,76,054	9,76,054	9,76,051
NET TOTAL	4,41,55,880	—88,356	4,40,67,521	4,30,10,774	4,20,37,712
APPORTIONMENT.					
40 IRRIGATION WORKS	4,40,58,932	—88,356	4,40,20,573		
43. MINOR WORKS AND NAVIGATION, IMPERIAL.	66,948	...	66,948		

(a). Excludes share of Accounts Establishment from 1912-13 to 1917-18.

No 3--REVENUE ACCOUNT FOR AND TO LND OF 1916-19.

(a) Excludes share of Account- Establishments from 1912-13 to 1917-18.
(b) Includes Rs. 21,742 on account of fee for collecting Revenue.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Jhelum Canal Project.

No. 4—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1917-18 ...	1,00,57,108	Net revenue realized to end of 1917-18 ..	—11,92,582
Do. for the year 1918-19 ..	...	Net revenue realized during 1918-10 ...	+62,860
Total outlay to 31st March 1919 4,40,87,521		Balance not interest charges ..	1,26,03,057
Less half outlay during 1918-10 —34,180			
Mean capital at charge			
Interest at 3.4818 per cent 4,41,21,701 ..	15,26,229		
Total ..	1,13,73,335		1,15,73,335

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-10.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue	1,95,425	11,725	2,07,150
Leave and Pension Allowances	6,86,508	18,794	7,05,302
Total ..	8,81,933	30,519	9,12,452
REVENUE—			
Capitalization of abatement of Land Revenue	700	...	700
Leave and Pension Allowances	69,126	52,647	1,21,773
TOTAL ..	99,826	52,647	1,22,473
GRAND TOTAL ..	9,81,759		

No. 6—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ...	3,30,10,625	12,07,063	3,42,26,683	3,40,651	53,933	—2,80,118	3,45,06,744	Sy. No. 77 WI 16,760
Establishment ..	47,21,048	3,51,710	5,173,658	..	12,273	12,273	50,73,658	" No. 7-2-18 074 WI 17,942
Tools and Plant ..	45,91,707	21,548	46,13,415	...	856	856	46,13,415	" No. 21 2-18
Suspense Balance ..	..	..	...	8,09,758	..	—8,09,758	8,09,758	
Total ..	4,13,33,340	15,80,426	4,39,13,766	11,49,809	73,062	—10,76,747	4,50,63,675	" No. 1769 WI 23,222,
Less Receipts on Capital Account.	3,68,987	6,10,097	9,76,054	..	...	...	9,76,054	" No. 0447 WI 1,522
Net Total ..	4,19,70,353	9,61,329	4,29,27,712	11,49,809	73,062	—10,76,747	4,49,97,521	" No. 27-18 2268 WI 16,248
INDIRECT CHARGES								
Capitalized abatement of Land Revenue.	1,82,300	24,850	2,07,150	...	...	...	2,07,150	
Leave and Pension Allowances	6,56,063	49,239	7,05,302	..	...	...	7,05,302	" No. 2270 WI 3,417
TOTAL ..	8,38,303	74,089	9,12,452	..	...	...	9,12,452	73,05 2
GRAND TOTAL ...	4,28,14,7-6	10,35,418	4,38,50,164	11,49,810	73,062	—10,76,747	4,49,99,973	Sanction to the Completion Schedule is awaited.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project - Imperial.

No. 2 CAPITAL ACCOUNT FOR AND TO END OF 1-1-19

HEADS OF ACCOUNT	Direct Charges			Cost of work done by the Government (estimated) based on 31st March 1919.	Expenditure by the Government
	Previous year	1918-19	Total		
I.—WORKS.					
2.—MAIN CANAL AND BRANCHES—	Rs.	Rs.	Rs.	Rs.	Rs.
F.—Land	3,028	..	3,028		
D.—Pipes, clater	12,187	..	12,187		
G.—Bricks	21,752	..	21,752		
K.—Boulders .. .. .	..	6,000	6,000		
J.—Path (oil)	89,574	..	89,574		
Total	1,34,541	6,000	1,40,541		
3.—DISTRIBUTION					
B.—Land	5,215	..	5,215		
C.—Works	18,771	..	18,771		
L.—Fertilizers	21,570	..	21,570		
Total	45,556	..	45,556		
TOTAL I. WORKS	1,80,097	6,000	1,86,097	1,86,097	1,86,097
II.—ESTABLISHMENT.					
6.—DIRECTOR	7,500	..	7,500		
C.—EXECUTIVE	22,750	..	22,750		
Total	30,250	..	30,250	30,250	30,250
III.—TOOLS AND PLANT.					
12.—MISCELLANEOUS	885	..	885		
13.—REPAIRS AND CARriage	20	..	20		
Total	905	..	905	905	905
GRAND TOTAL	2,05,953	6,000	2,11,953	2,11,953	2,11,953
APPORTIONMENT.					
40.—IRRIGATION WORKS	2,05,953	6,000	2,11,953	2,11,953	2,11,953

Note.—Capital and Revenue Accounts of these canals will continue to be prepared separately until the Shahpur Branch of the Lower Jhelum Canal has been constructed and opened for irrigation, vide Secretary to Government, Punjab, P.W.D., Irrigation Branch, letter No. 0-6A, L, dated 27th June 1905.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project—Imperial

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
				(1) — EXTENSIONS AND IMPROVEMENTS.			
Occupiers' rates...	23,72,023	61,479	24,33,514	2.—MAIN CANAL AND BRANCHES	82,238	10	82,254
				3.—DISTRIBUTARIES	14,623	...	14,623
				TOTAL (1)	96,861	10	96,877
Sale of water ...	1,316	..	1,316	(2) — MAINTENANCE AND REPAIRS.			
				(2) — MAIN CANAL AND BRANCHES	9,45,362	20,807	9,66,169
Receipts from Plantation ...	16,601	..	16,601	3 — DISTRIBUTARIES	1,32,770	5,092	1,37,862
				TOTAL (2)	7,78,632	25,909	8,04,541
Receipts from other Canal Produce.	3,856	...	3,856	(3) — COMPENSATION	553	..	553
				(4) — ESTABLISHMENT			
Rent of Buildings	1,368	...	1,368	(5) — DIRECTION AND ACCOUNT	85,155		
				6.—EXECUTIVE ESTABLISHMENT	5,17,356		
				7.—MEDICAL Do.		(a)	(b)
Fines	1,866	..	1,866	7A.—REVENUE Do.		32,468	6,34,983
				7B.—NAVIGATION Do.			
				TOTAL	6,02,515	32,468	6,34,983
Miscellaneous and other Receipts.	1,719	..	1,719	(6) — TOOLS AND PLANT.			
				12.—MISCELLANEOUS	3,109		
				13.—REPAIRS AND CARRIAGE	2,012	1,071	6,212
Total	28,08,780	61,479	28,70,259	TOTAL	5,121	1,081	6,212
				8.—REFUNDS OF REVENUE	1,238	...	1,238
				TOTAL	14,84,015	86,161	15,44,379
Share of Land Revenue collected in the Civil Department.	4,17,392	20,618	4,38,010	indirect Charges debitable to Revenue Account as per Account No. 5.	85,823	4,546	90,369
				TOTAL CHARGES	15,70,738	91,010	16,34,748
Total	4,17,392	20,618	4,38,010	Balance, not Revenue	12,45,434	18,087	12,63,521
TOTAL RECEIPTS	28,18,172	82,097	28,98,269	GRAND TOTAL	28,10,172	82,097	28,98,269

(a) Includes Rs. 1,520 on Account of fees and allowances for collection of Revenue.

(b) Excludes share of Accounts Establishment from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project—Imperial

No 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19

Particulars	Post-1918-19	1918-19	Total
CAPITAL—	Rs.	Rs.	Rs.
Capitalization of abatement of Land Revenue	5,638	..	5,638
Leave and Pension Allowances	4,693	350	5,043
Total ..	10,331	350	10,681
DEBIT—			
Capitalization of abatement of Land Revenue	544	..	544
Leave and Pension Allowances	5,170	1,117	6,287
Total ..	5,714	1,117	6,831
Grand Total ..	10,331	467	10,798

No 6. STATEMENT COMPARING CHARGES TO DATE WITH FANCTIONED FUNDING

PARTICULARS.	CHARGES AGAINST CREDIT FUNDING			CHARGES FROM FUNDING				BALANCE.
	Expenditure against Capitalization Estimates	Expenditure against Capitalization Estimates	Total	Charged to Date	Amount of Capitalization Estimate	Amount of Capitalization Estimate	Total charged to Date	
DIRECT CHARGES	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Works ..	1,75,000	1,75,000	1,75,000	..	..	..	1,75,000	..
Establishments ..	20,000	20,000	20,000	..	..	..	20,000	..
Tools and Plant ..	500	500	500	..	..	..	500	..
Total ..	1,95,500	1,95,500	1,96,000	..	..	..	1,95,500	..
Less Receipts on Capital Account ..	..	..	..	..	..	..	..	..
Net Total ..	1,95,500	1,95,500	1,96,000	..	..	..	1,95,500	..
INDIRECT CHARGES—								
Capitalization of abatement of Land Revenue ..	5,638	..	5,638	..	..	..	5,638	..
Leave and Pension Allowances ..	4,693	350	5,043	..	..	..	5,043	..
Total ..	10,331	350	10,681	..	..	..	10,681	..
GRAND TOTAL ..	2,05,831	2,05,850	2,06,681	..	..	..	2,06,181	..

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ghaggar Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	DIRECT CHARGES.								
	Imperial.			Contribution.			Total.		
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1.—WORKS.									
1.—HEAD WORKS—									
B.—Land	432	..	432	288	..	288	720	..	720
C.—Works	60,817	..	60,817	39,878	..	60,878	60,095	..	60,895
K.—Buildings	2,180	..	2,180	1,468	..	1,468	3,044	..	3,544
Total	62,435	..	62,435	41,624	..	41,624	1,04,069	..	1,01,659
2.—MAIN CANAL AND BRANCHES.									
A.—Preliminary Expenses	7,560	..	7,560	5,040	..	5,040	12,010	..	12,010
B.—Land	8,750	..	8,750	8,294	..	8,294	17,044	..	17,044
D.—Regulators	10,082	..	10,082	8,434	..	8,434	28,110	..	28,110
E.—Falls and Weirs	1,861	..	1,861	5,040	..	5,040	6,910	..	6,910
G.—Bridges	24,076	..	24,076	27,690	..	27,690	61,776	..	61,776
H.—Escapes	13,183	..	13,183	5,051	..	5,051	18,839	..	16,839
K.—Buildings	5,912	2,302	8,214	13,305	676	15,071	21,307	2,878	24,185
L.—Earthwork	77,205	..	77,205	1,10,100	..	1,10,100	1,87,814	..	1,87,814
O.—Miscellaneous	1,837	..	1,837	2,588	..	2,588	4,425	..	4,425
Total	1,66,080	2,302	1,68,382	1,88,265	676	1,88,941	8,48,345	2,878	3,51,223
3.—DISTRIBUTARIES—									
A.—Preliminary Expenses	403	..	403	..	..	..	403	..	403
B.—Land	3,933	..	3,933	..	..	..	3,933	..	3,933
C.—Works	17,905	..	17,905	..	..	..	17,905	..	17,905
L.—Earthwork	29,210	..	29,210	..	..	..	29,210	..	29,210
O.—Miscellaneous	14,783	..	14,783	8,745	..	8,745	23,528	..	33,528
TOTAL	66,324	..	66,324	8,745	..	8,745	76,069	..	76,069

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ghaggar Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of Protection Works included in estimate of 1918-19, but not included in this statement.	Hypothetical estimate.
	Imperial.			Contribution.			Total.				
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.		
	R.	Rs.	Rs.	R.	Rs.	Rs.	R.	Rs.	Rs.	R.	Rs.
4.—DRAINAGE AND PROTECTIVE WORKS.											
L.—Earthwork	5,501	..	5,501	..	..	..	5,501	..	5,501	..	..
TOTAL	5,501	..	5,501	..	..	..	5,501	..	5,501	..	..
TOTAL I.—WORKS	2,714,610	2,302	2,716,912	2,714,610	2,302	2,716,912	2,714,610	2,302	2,716,912	2,714,610	2,302
II.—ESTABLISHMENT											
B.—Direction and Account	13,415	..	13,415	..	..	..	13,415	..	13,415	..	..
C.—EXECUTIVE	43,632	76	43,708	43,632	76	43,708	43,632	76	43,708	..	..
D.—MEDICAL	2,427	..	2,427	..	..	..	2,427	..	2,427	..	..
LEAVE AND PENSION ALLOWANCES .. ..	..	..	..	2,427	18	2,445	2,427	18	2,445	..	..
TOTAL	62,474	76	62,550	46,069	147	46,216	62,474	92	62,566	62,474	92
III.—TOOLS AND PLANT.											
12.—MISCELLANEOUS	7,023	34	7,057	7,023	34	7,057	7,023	34	7,057	..	..
TOTAL	7,023	34	7,057	7,023	34	7,057	7,023	34	7,057	7,023	34
GRAND TOTAL	1,65,365	3,042	1,68,407	1,65,365	732	1,66,097	1,65,365	774	1,66,139	1,65,365	774
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.											
NET TOTAL	1,65,365	3,042	1,68,407	1,65,365	732	1,66,097	1,65,365	774	1,66,139	1,65,365	774
APPORTIONMENT.											
42.—M. W. AND NAVIGATION, IMPERIAL	1,08,765	3,042	1,11,807	1,08,765	732	1,09,497	1,08,765	774	1,09,539	1,08,765	774

(a) Share of Accounts Establishment excluded for the years 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ghaggar Canal Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL			CONTRIBUTION.			TOTAL.		
	Previous.	1918-19	Total.	Previous	1918 19	Total.	Previous	1918 19	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Occupiers rates ..	1,61,801	12,277	1,74,169	..	..	..	1,61,801	12,277	1,74,169
Receipts from Plantation ..	2	..	2	2	..	2	4	..	6
Receipts from other Canal produce.	..	..	..	1	..	1	1	..	1
Rent of Buildings ..	232	..	232	148	..	148	380	..	380
Fines ..	260	..	260	70	..	70	330	..	330
Miscellaneous and other Receipts.	184	..	184	120	..	120	304	..	304
Total ..	1,62,569	12,277	1,74,846	341	..	341	1,62,910	12,277	1,75,187
TOTAL RECEIPTS ..	1,62,569	12,277	1,74,846	341	..	341	1,62,910	12,277	1,75,187

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ghaggar Canal Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Charges.	INITIAL.			CONSTRUCTION.			TOTAL.		
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(1).—EXTENSIONS AND IMPROVEMENTS.									
(1).—HEAD WORKS ..	10,000	..	10,000	1,000	..	1,000	12,000	..	12,000
(2).—MAIN CANAL AND BRANCHES ..	17,000	2,000	19,000	2,000	2,000	4,000	17,000	2,000	19,000
(3).—DISTRIBUTORIES ..	4,000	..	4,000	..	..	..	4,000	..	4,000
(4).—DRAINAGE AND PROTECTIVE WORKS.	800	..	800	..	..	..	800	..	800
TOTAL (1) ..	22,800	2,000	24,800	3,000	2,000	5,000	22,800	2,000	24,800
(2).—MAINTENANCE AND REPAIRS.									
(1).—HEAD WORKS ..	31,713	1,000	32,713	21,000	713	21,713	22,902	1,500	24,402
(2).—MAIN CANAL AND BRANCHES ..	10,000	4,000	14,000	6,000	1,000	7,000	10,000	2,000	12,000
(3).—DISTRIBUTORIES ..	28,000	1,000	29,000	..	..	..	28,000	1,000	29,000
(4).—DRAINAGE AND PROTECTIVE WORKS.	800	..	800	..	..	..	800	..	800
TOTAL (2) ..	70,513	6,000	76,513	27,000	1,713	28,713	70,513	4,000	74,513
(3).—COMPENSATION ..	10,000	..	10,000	..	..	..	10,000	..	10,000
(4).—ESTABLISHMENT.									
(1).—GENERAL ESTABLISHMENT IN CURRENT OPERATION AND ACCOUNTS.	21,000	..	21,000	1,000	..	1,000	22,000	..	22,000
(2).—ESTABLISHMENT ..	2,000	5,000	7,000	1,000	2,000	3,000	2,000	7,000	9,000
(3).—MEDICAL ..	6,000	..	6,000	..	..	..	6,000	..	6,000
(4).—REPAIRS ..	1,000	7,000	8,000	..	..	..	1,000	7,000	8,000
(5).—LIFE AND DEATH ..	..	..	..	2,000	71	2,071	2,000	71	2,071
TOTAL ..	30,000	12,000	42,000	4,000	2,071	6,071	30,000	12,071	42,071
5.—TOOLS AND PLANT.									
(1).—REPAIRS ..	—773	120	—653	1,000	31	1,031	—773	120	—653
(2).—REPAIRS AND CARRIAGE ..	3,000	..	3,000	..	..	..	3,000	..	3,000
TOTAL ..	2,227	120	2,347	1,000	31	1,031	2,227	120	2,347
(6).—REFUNDS OF REVENUE	2,000	..	2,000	..	..	..	2,000	..	2,000
TOTAL ..	4,227	120	4,347	1,000	31	1,031	4,227	120	4,347
Indirect charges debitable to Revenue Account as per Account No. 6.	61,000	1,000	62,000	..	..	..	61,000	1,000	62,000
TOTAL CHARGES ..	63,227	20,721	83,948	11,000	2,802	13,802	63,227	23,721	86,948
BALANCE NET REVENUE ..	—4,76,705	—8,511	—4,85,216	—1,19,316	—2,802	—1,22,118	—4,76,705	—11,312	—4,88,017
GRAND TOTAL ..	1,22,522	12,210	1,34,732	12,000	311	12,311	1,22,522	12,210	1,34,732

(a) Includes Rs. 360 on account of fees for collection of Revenue.

(b) Share of Accounts Establishment excluded from 1912-13 to 1917-18.

OFFICE OF THE ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Chaggar Canal Project.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue	2,000	..	2,000
Leave and Pension Allowances .. { Imperial	8,792	98	8,890
{ Contribution	5,430	18	5,447
Total ..	16,231	116	16,347
<i>Deduct—Leave and Pension Allowances debitible to Bikaner State treated as direct charges and transferred to Account No. 2 of the canal.</i>	5,430	18	5,447
Net debitible to Imperial ..	10,792	98	10,890
REVENUE—			
Capitalization of abatement of Land Revenue .. .. .	..	..	..
Leave and Pension Allowances .. { Imperial	51,998	1,493	53,491
{ Contribution	3,068	71	3,127
Total ..	55,021	1,564	56,585
<i>Deduct—Leave and Pension Allowances debitible to Bikaner State treated as direct charges and transferred to Account No. 3 of the canal.</i>	3,068	71	3,127
Total ..	51,958	1,493	53,451

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGE AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charge to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
DIRECT CHARGES—								
Wor ..	4,98,214	35,022	5,33,236	2,911	2,691	—220	5,36,152	
Establishment ..	1,00,070	8,971	1,09,041	..	817	817	1,07,411	
Tools and Plant ..	10,048	452	10,500	..	40	40	10,500	
Total ..	6,09,232	42,450	6,51,682	2,911	3,548	437	6,51,593	
Less Receipts on Capital Account ..								
Net Total ..	6,09,232	42,450	6,51,682	2,911	3,34	37	6,51,593	
INDIRECT CHARGES—								
Capitalized or abatement of Land Revenue ..	1,000	100	2,000	..	..	..	2,000	
Leave and Pension Allowances ..	7,868	922	8,890	..	..	..	8,890	
Total ..	8,868	1,022	10,890	2,911	..	..	10,890	
GRAND TOTAL ..	6,18,100	43,472	6,61,572	2,911	3,346	437	6,65,183	

Secretary's No. 1770 W. I., dated 11th May 1919, Rs. 3,348.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sutlej Inundation Canals including Hajiwah Canal Project.

NO. 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	REVENUE			CHARGES.	TOTAL		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	P.	As.		P.	Rs.	P.
Occupiers' rates ..	30,27,434	2,33,170	12,12,917	1.—EXTENSIONS AND IMPROVEMENTS 1.—MAIN CANALS & BRANCHES ..	9,10,292	91,000	10,01,292
Sales of water ..	3,212	30	2,12	2.—DRAINAGE WORKS ..	1,00,000	10,000	1,10,000
Receipts from Plantations ..	70,710	1,000	71,710	3.—DRAINAGE AND PROTECTIVE WORKS ..	2,000	—	2,000
Receipts from other Canal produce ..	24,270	200	24,470	TOTAL (1) ..	10,11,292	1,01,000	11,12,292
Rent of Buildings ..	—	—	—	2.—MAINTENANCE AND REPAIRS 1.—MAIN CANALS & BRANCHES ..	2,00,000	20,000	2,20,000
Fines ..	31,000	1,000	32,000	2.—DRAINAGE WORKS ..	1,00,000	10,000	1,10,000
Miscellaneous and other Receipts ..	—	—	—	3.—DRAINAGE WORKS ..	2,000	—	2,000
Total ..	41,22,770	2,34,170	12,13,947	TOTAL (2) ..	3,02,000	30,000	3,32,000
Contribution ..	12,15,000	—	12,15,000	3.—COMPENSATION ..	4,000	—	4,000
Other Labour ..	30,21,110	—	30,21,110	4.—ESTABLISHMENT 1.—OFFICE AND ACCOUNTS ..	1,00,000	10,000	1,10,000
Share of Land Revenue collected in the Civil Department ..	97,83,125	2,75,000	1,00,58,125	2.—OFFICE ..	2,000	—	2,000
Total Receipts ..	1,00,77,020	5,30,170	1,06,07,190	3.—REPAIRS ..	1,00,000	10,000	1,10,000
				4.—DRAINAGE ..	1,00,000	10,000	1,10,000
				TOTAL ..	3,02,000	30,000	3,32,000
				5.—REVENUE OF REVENUE FUND AND LOSS ..	1,000	—	1,000
				6.—REVENUE ACCOUNT ..	2,000	—	2,000
				Miscellaneous Advances ..	—	—	—
				Stock ..	2,000	2,000	4,000
				Stock ..	—	—	—
				TOTAL ..	3,02,000	30,000	3,32,000
				Other Labour ..	1,00,000	—	1,00,000
				TOTAL ..	1,01,000	—	1,01,000
				Indirect charges attributable to Revenue Account as per Account No. 2 ..	1,01,000	10,000	1,11,000
				Total Charges ..	1,11,000	40,000	1,51,000
				Balance, Net Revenue ..	70,20,000	1,01,000	71,21,000
				GRAND TOTAL ..	1,01,77,020	5,30,170	1,07,07,190

(a) Share of Account's Establishment excluded from 1912-13 to 1917-18.
 (b) Includes a sum of Rs. 7,165 on account of loss for collection of Revenue.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sutlej Inundation Canals including Hajiwah Canal Project.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation abatement of Land Revenue ..	5		
Leave and Pension allowances ..	4,01,199	18,260	4,19,459
Total ..	4,01,204	18,260	4,19,464

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sutlej Inundation Canals (Hajiwah Canal Project)

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Receipts.	IMPERIAL.			Charges.	IMPERIAL.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ..	5,44,781	21,323	5,66,104	(1) EXTENSIONS AND IMPROVEMENTS (2) MAIN CANAL & Branches ..	27,125	..	27,125
				(3) DISTRICT STAFFS ..	17	..	17
				Total (1) ..	27,142	..	27,142
Sales of water ..	11	..	11	(4) MAINTENANCE AND REPAIRS ..			
				(5) MAIN CANAL & BRANCHES ..	2,71,641	6,274	2,77,915
Receipts from Plantations ..	187	..	187	(7) DISTRICT STAFFS ..	19	..	19
				Total (2) ..	2,71,660	6,274	2,77,934
Receipts from other Canal Produce ..	35	..	35	(3) COMPENSATION ..			
				(4) ESTABLISHMENT ..	..	
Miscellaneous and other Receipts ..	10	..	10	(5) DEPRECIATION AND AMORTISATION ..	2,11,724	4,472	2,16,196
				(6) PAYMENT OF EXPENSES ..	26,225		26,225
				(7) (A) REVENUE ..	40,219		40,219
				Total ..	1,48,828	4,472	1,53,300
				(8) TOOLS & PLANT ..			
				(9) (NAVIGATION PLANT ..			
				(10) MISCELLANEOUS ..	2,800	67	2,867
Total ..	5,44,884	21,323	5,66,207	(11) REPAIRS AND CARRIAGE ..			
				Total ..	2,800	67	2,867
				(12) REFUNDS OF EXCESS ..	20	..	20
				7. PROFIT AND LOSS ..			
Share of land revenue collected in the Civil Department ..	2,36,912	31,250	2,68,162	Total ..	14,754	10,000	47,754
				Interest Charges debitable to Revenue Accounts as per Account No. 5 ..	21,500	695	22,195
				Total Charges ..	4,00,244	11,200	4,11,444
				Balance, Net Revenue ..	6,11,481	41,607	6,53,088
TOTAL RECEIPTS ..	10,80,826	52,613	11,33,439	GRAND TOTAL ..	10,80,826	52,613	11,33,439

(D) Share of Accounts Establishment for 1912-13 to 1917-18 excluded.

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IRRIGATION BRANCH,

PUNJAB PROVINCE,

OFFICE OF ACCOUNTANT-GENERAL,

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sutlej Inundation Canals and Hajiwah Canal Project.

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars,	Previous,	1918-19,	Total.
REVENUE—			
Grants and Pension Allowances	20,564	598	21,162
Total	20,564	598	21,162

OFFICE OF ACCOUNTANT-GENERAL
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Chenab Inundation Canals Project.

No. 2.—PROVINCIAL ACCOUNTS FOR AND TO END OF 1918-19.

Receipts.	1918-19.			Expenditure.	1918-19.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupancy rates ..	30,81,930	1,02,712	32,45,442	1.—EXTENSION AND IMPROVEMENT.			
				1.—Main Canal & Branches ..	7,11,240	1,000	9,12,151
				2.—Distribution Schemes ..	1,57,102	3,100	1,60,351
Sal. of water ..	3,500	404	4,300	3.—Development and Protection of Works ..	2,741	1,400	2,840
				Total ..	10,404	5,500	11,172
Receipts from plantation ..	1,12,137	8716	1,21,852	2.—MAINTENANCE AND REPAIRS.			
				2.—Main Canal & Branches ..	32,01,700	47,210	32,71,742
Receipts from other Canal produce.	45,425	10	45,514	3.—Distribution Schemes ..	1,41,014	14,710	1,75,100
				4.—Distribution Works ..	1,42,000	17,000	1,72,000
Cost of Buildings ..	1,000	300	2,000	Total ..	7,41,724	89,120	7,75,100
				3.—COMPENSATION ..	1,000	70	2,070
Fuel ..	40,000	600	41,600	4.—GENERAL ESTABLISHMENT (INCLUDING C. & P.).	4,00,000	47,200	4,47,200
				5.—Freighting Expenses ..			
Miscellaneous and other Receipts ..	1,000	600	4,000	6.—Stores ..	17,14,000	22,200	17,40,000
				7A.—Revenue ..			
Total ..	32,00,000	2,00,000	34,00,000	Total ..	32,46,000	72,500	32,75,000
				1.—TOOKS & PLANT.			
Contribution ..	11,47,500		11,47,500	10.—Miscellaneous ..	31,000		31,000
				11.—Repairs and Carriage ..			
Other Labour ..	21,05,114		21,05,114	Total ..	31,000	500	31,500
				6.—REVENUE OF REVENUE ..	9,900	124	10,024
				7.—PROFIT AND LOSS ..	425		425
Total ..	65,13,500	2,00,000	71,22,500	Total ..	1,27,740	1,75,384	1,29,740
				Other Labour ..	21,05,114		21,05,114
				Total ..	21,37,901	1,75,384	21,71,285
Share of land revenue collected in Civil Department ..	1,61,51,100	3,65,715	1,65,16,815	Indirect Charges debitable to Revenue Account as per Account No. 3.	3,64,300	10,200	3,74,500
				Total Charges ..	3,64,300	1,75,621	3,75,921
				Balance, Net Revenue ..	73,91,420	1,62,111	75,99,001
Total Receipts ..	1,60,98,120	4,77,702	1,74,72,822	GRAND TOTAL ..	1,60,98,120	4,77,702	1,74,72,822

(4) Share of accounts of establishments excluded from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

unaffected
 Chenab Inundation Canals Project.

No 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Precious.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation abatement of Land Revenue ..	8,536	—	8,536
Leave and Pension allowances	3,55,960	10,293	3,66,153
Total, ..	3,64,496	10,293	3,74,689

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Musaftargah Inundation Canals Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Receipts.	Journal.			Charges.	Journal.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupation rates ..	32,52,445	2,78,567	35,31,012	1.—EXPENDITURE AND IM- PROVEMENTS ..	7,12,077	9,147	7,21,224
Sales of water ..	2,774	7	2,781	1.—Maintenance & Repairs ..	1,27,000	12,672	1,39,672
Receipts from plantations..	1,42,000	6,745	1,48,745	2.—Planting and Pruning Tree Works ..	2,771	..	2,771
Receipts from other Canal produce ..	7,007	429	7,436	Total (1) ..	9,12,848	21,819	9,34,667
Sites ..	21,512	1,661	23,173	2.—MAINTENANCE AND REPAIRS ..	3,12,245	1,27,800	4,40,045
Miscellaneous and other Receipts ..	12,200	232	12,432	2.—Maintenance & Repairs ..	2,72,800	2,000	2,74,800
Total ..	39,46,788	2,86,513	42,33,301	3.—Repairs and Works ..	30,000	..	30,000
Contribution ..	8,01,270	..	8,01,270	Total (2) ..	3,42,845	1,29,800	3,72,645
Other Labour ..	24,34,253	..	24,34,253	3.—COMPENSATION ..	7,000	..	7,000
Total ..	71,77,306	2,86,513	74,63,819	3.—General Extraordinary Account and Other Accounts ..	2,50,000	..	2,50,000
Share of land revenue col- lected in the Civil Depart- ment ..	1,14,36,304	2,71,778	1,17,08,082	4.—Excise ..	1,14,000	..	1,14,000
Total Receipts ..	1,50,12,694	6,40,121	1,56,52,815	5.—Revenue ..	2,11,700	22,372	2,34,072
				Total ..	2,32,845	1,29,800	2,62,645
				(3)—TOOLS AND PLANT ..	742	..	742
				1.—Tools and Plant ..	1,500	..	1,500
				2.—Tools ..	..	..	..
				3.—Tools ..	..	..	..
				4.—Tools ..	..	..	..
				5.—Tools ..	..	..	..
				6.—Tools ..	..	..	..
				7.—Tools ..	..	..	..
				8.—Tools ..	..	..	..
				9.—Tools ..	..	..	..
				10.—Tools ..	..	..	..
				11.—Tools ..	..	..	..
				12.—Tools ..	..	..	..
				Total (3) ..	1,500	..	1,500
				6.—REVENUE OF LANDS ..	..	..	..
				1.—Revenue ..	..	..	..
				2.—Revenue ..	..	..	..
				3.—Revenue ..	..	..	..
				4.—Revenue ..	..	..	..
				5.—Revenue ..	..	..	..
				6.—Revenue ..	..	..	..
				7.—Revenue ..	..	..	..
				8.—Revenue ..	..	..	..
				9.—Revenue ..	..	..	..
				10.—Revenue ..	..	..	..
				11.—Revenue ..	..	..	..
				12.—Revenue ..	..	..	..
				Total ..	..	..	..
				Other Labour ..	24,34,253	..	24,34,253
				Total ..	24,34,253	..	24,34,253
				Indirect charges debitable to Revenue Account ..	4,29,300	10,185	4,39,485
				Total charges ..	1,03,20,845	2,41,985	1,05,62,830
				Balance, Not Received ..	82,01,757	2,00,749	84,02,506
				Grand Total ..	1,56,12,694	6,40,121	1,62,52,815

(a) Includes Rs. 8,417 on account of fees for collection of Revenue.
 (b) Share of Accounts Establishment excluded from 1914-15 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Chenab Inundation Canals Project.

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars,	Previous,	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation abatement of Land Revenue ..	18,315	800	18,625
Leave and Pension Allowances ..	4,11,025	18,815	4,29,840
Total ..	4,29,340	19,615	4,48,955

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project—Provincial.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

REVENUE.	PROVINCIAL.			CHARGES.	PROVINCIAL.		
	1917-18.	1918-19.	Total.		1917-18.	1918-19.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ..	22,870	20,484	43,354	(1) EXTENSIONS AND IMPROVEMENTS.			
				(2).—Main Canal & Branches.	33,751	..	33,751
				(3).—Lateral Canals ..	11,687	..	11,687
Sales of water ..	8,623	..	8,623	TOTAL (1) ..	45,438	..	45,438
				(2).—MAINTENANCE AND REPAIRS.			
Receipts from Plantations	7,160	..	7,160	(a).—Main Canal & Branches.	25,125	15,100	40,225
				(b).—Lateral Canals ..	72,800	2,227	75,027
				TOTAL (2) M. & R. ..	97,925	17,327	115,252
Receipts from other Canal Produce.	400	..	400	(3).—COMPENSATION.	..	..	..
				(4).—ESTABLISHMENT			
				(a).—Director and Secretary ..	61,222	..	61,222
				(b).—Executive Canal Engineer ..	..	15,000	15,000
Water power ..	920	..	920	(c).—M. & R. ..	2,870	..	2,870
				TOTAL ..	64,092	15,000	79,092
				(5).—TOOLS & PLANT.			
Fees ..	713	..	713	(a).—Miscellaneous ..	1,607	..	1,607
				(b).—Repairs and Carriage ..	1,800	..	1,800
Miscellaneous and other Receipts.	3,803	..	3,803	TOTAL ..	3,407	..	3,407
				7.—PROFIT AND LOSS			
				TOTAL ..	610	..	610
Total ..	2,15,823	2,1,104	2,36,927		2,19,147	36,400	2,55,547
				Indirect Charges & Liabilities to Revenue Account as per Account No. 5.	61,000	2,430	63,430
Share of Land Revenue collected in the Civil Department.	2,05,100	12,120	2,17,220	Total Charges ..	8,80,216	30,010	9,10,226
				Balance, Net Revenue ..	2,73,665	2,605	2,76,270
Total Receipts ..	11,65,932	41,614	12,07,546	GRAND TOTAL ..	11,65,932	41,614	12,07,546

(a) Includes Rs. 700 on account of fees and allowances for collection of Revenue.
 (b) Share of Accounts Establishment excluded from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project—Provincial. 40

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation of abatement of Land Revenue ..	1,003	..	1,003
Leave and Pension Allowances	59,400	2,754	62,154
Total ..	61,000	2,754	63,754

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ravi Inundation Canals Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19

Receipts	Revenue			Charges	Payments		
	Previous	1918-19	Total		Previous	1918-19	Total
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupants rates ..	1,01,273	..	1,01,273	1.—EXPENDITURE AND IMPROVEMENTS.			
				2.—Main Canal and Branches	800	..	800
				Total (1) ..	800	..	800
Sales of water ..	27	..	27	3.—MAINTENANCE AND REPAIRS.			
				2.—Main Canal and Branches	12,157	..	12,157
				3.—Discharge Pipe ..	6,123	..	6,123
				Total (2) and (3) ..	18,280	..	18,280
Fine ..	..	..	..	4.—COMPENSATION	71	..	71
				5.—FURNISHMENTS	23,723	..	23,723
				6.—Electricity ..	..	..	..
				7.—Insurance ..	..	..	..
				8.—Medical ..	1,10,000	..	1,10,000
				9.—Reserve ..	..	..	..
Miscellaneous and other Receipts ..	..	..	..	Total ..	1,34,974	..	1,34,974
				10.—TOOLS AND PLANT			
				11.—Maintenance ..	1,722	..	1,722
				12.—Repairs and Carriage ..	915	..	915
Total ..	1,01,300	..	1,01,300	Total ..	2,627	..	2,627
				13.—FUNDS OF THE GOVT.	1,000	..	1,000
				Total ..	2,42,012	..	2,42,012
				Indirect Charges debitable to Revenue Account as per Account No. 5 ..	19,424	..	19,424
Share of Land Revenue collected in the Civil Department.	1,27,509	..	1,27,509	Total Charges ..	2,61,436	..	2,61,436
				Balance, Net Revenue ..	-28,043	..	-28,043
Total Receipts ..	2,33,423	..	2,33,423	Grand Total ..	2,33,423	..	2,33,423

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ravi Inundation Canals Project.

No 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Leave and Pension allowances	10,424		10,424
Total	10,424		10,424